



Module 18

COMPARATIVE EDUCATION

Themes and Trends in Comparative Education in SADC Countries



THE COMMONWEALTH *of* LEARNING

General Education Modules
for Upper Primary and Junior Secondary School Teachers
of Science, Technology and Mathematics by Distance
in the Southern African Development Community (SADC)

Developed by

The Southern African Development Community

Ministries of Education in:

- Botswana
- Malawi
- Mozambique
- Namibia
- South Africa
- Tanzania
- Zambia
- Zimbabwe

In partnership with The Commonwealth of Learning

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GENERAL EDUCATION MODULES

This module is one of a series prepared under the auspices of the Southern African Development Community (SADC) and The Commonwealth of Learning as part of the Science, Technology and Mathematics Programme (STAMP 2000+). These General Education modules enable teachers to enhance their professional skills through distance and open learning. Many individuals and groups have been involved in writing and producing these modules. We trust that they will benefit not only the teachers who use them, but also, ultimately, their students and the communities and nations in which they live.

The eighteen General Education modules are as follows:

- Module 1: *Multigrade Teaching: Introduction to Multigrade Teaching*
- Module 2: *Multigrade Teaching: Classroom Organisation and Management*
- Module 3: *The Reading Process*
- Module 4: *Developing Reading Skills*
- Module 5: *Special Educational Needs: An Introduction to Teaching Traumatised Children*
- Module 6: *Special Educational Needs: A Practical Guide to Teaching Traumatised Children*
- Module 7: *Education Management Development: Part A*
- Module 8: *Education Management Development: Part B*
- Module 9: *Child Development*
- Module 10: *Concepts of Learning*
- Module 11: *An Introduction to Concepts in Language and Communication*
- Module 12: *Language and Communication: Language in Use*
- Module 13: *Curriculum Theory, Design and Assessment*
- Module 14: *Curriculum Practice*
- Module 15: *A Theoretical Framework on Innovations in Education*
- Module 16: *Effects of Social Changes on Education*
- Module 17: *Comparative Education: Introduction to Key Concepts in Comparative Education*
- Module 18: *Comparative Education: Themes and Trends in Comparative Education in SADC Countries*

A MESSAGE FROM THE COMMONWEALTH OF LEARNING



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Comparative Education
in SADC Countries

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COMPARATIVE EDUCATION

Themes and Trends in Comparative Education in SADC Countries

Comparative education is a sub-discipline of pedagogy, which is the art and science of teaching. It has evolved from a study of foreign education systems for the purpose of enriching, even copying, those characteristics that were admired, to the study of circumstances that influence education in a country, whether or not those circumstances have parallels in other regions. We hope that studying other education systems might help you to find solutions to problems in your own country. You must appreciate, however, that every country's experience is unique and so avoid copying uncritically another's solutions.

This module will:

- focus on the aims of the various education systems in the SADC region and how these aims have affected curriculum development, language policy, delivery systems and administration;
- discuss educational outcomes and their benefits and costs; and
- examine the role education plays in the development of human capital needed to shift the economies of the SADC region from the primary production of raw materials to a more industrialised and modern economy.

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LEARNING TIPS

You will find the following tips helpful as you study this module.

- **Set aside some time each day to work on this module.** If possible, study at the same time and in the same place so you are comfortable with your study surroundings. Learning at a distance requires discipline and motivation.
- **Go through the module unit by unit.**
- **Note any words you do not understand.** Look them up in a dictionary or other reference source or discuss them with your colleagues.
- **Underline or highlight important passages.** Make summary notes in the margins of long passages. Writing will help you to remember the material. You may also choose to make diagrams that illustrate how different ideas are related or list the steps in a procedure or technique.
- As you work through this module, **keep in mind your learners and their educational needs** as well as your instructional goals and your subject matter. How will you apply what you are learning?
- Read the assignment instructions carefully. Then, **do all the self-assessment activities** before proceeding to the Suggested Answers section.
- **As you undertake each activity, relate it to the practice of teaching** and analyse how it will help you to enhance the teaching-learning situation. Always ask yourself how you could use this material.
- **Apply some of the suggested techniques to your teaching.** All suggestions may not be appropriate for your situation, but how will you know unless you try them? Keep a record of what techniques work and an explanation of why some techniques appeared to fail. What does not work now may work later with different students.
- It may be difficult, but try to **meet occasionally with other teachers** to discuss the content and application of suggestions provided in this module.
- If you experience difficulty in understanding some aspect of the module, do not despair! You are meant to be challenged. **Do not give up!** Just remember that your goal is to be the best teacher that you can be. Think of what you would tell a student who was experiencing difficulty in your classroom. Then, apply the same advice to yourself.

ICONS

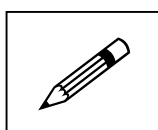
Throughout each module, you will find the following icons or graphic symbols that alert you to a change in activity within the module. Only the icons that are required are used in each module.



Text or Reading Material: provides information about the topics that are covered in a module. The subject matter for each SADC module is organised into units.



Introductory Activity: requires you to focus on the content that will be discussed in a unit.



Self-Assessment: enables you to check your understanding of what you have read and, in some cases, to apply the information presented in the unit to new situations.



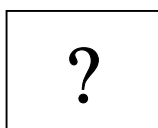
Practice Activity: encourages you to review and apply what you have learned before taking a unit test.



Reflection: asks you to relate what you have learned to your work as a teacher or education officer in your community.



Summary: highlights or provides an overview of the most important points covered in a unit.

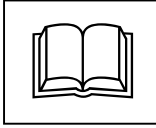


Unit Test: concludes each unit.



Suggested Answers: allow you to evaluate your learning by providing sample answers to assessments, activities and the unit test.

UNIT 1: Aims of Education Systems in the SADC Region



Introduction

We can not compare education systems in the Southern African Development Community (SADC) region without establishing the aims of those systems. The purpose of implementing programmes or maintaining structures must first be clearly defined. What do the governments of the SADC region, and presumably their people, want from their education systems? These considerations determine the shape the education system takes, what models it turns to for inspiration and how it responds to the challenges it faces.

However, before we focus on these issues, it might be instructive to consider for a moment the influences that have shaped and continue to shape our education systems.

Objectives

After completing this unit, you should be able to:

1. Identify the educational policy aims of various SADC countries.
2. Compare these policies, citing differences and common features.
3. Evaluate these policies as reactions to circumstances and regional forces.

Rationale for Making Generalisations in the SADC Region

Module 17 discussed common trends in education since independence for countries in the SADC region. These trends have arisen because of influences that are not identical, but at least share common features.

It is important to remember that while we might generalise about common features, the SADC region is vast, and it contains many diverse groups with different cultures. However, just at the point when we might despair at justifying broad themes and encompassing conclusions, we would do well to remember that all these groups, except the San of Botswana, belong to the Bantu-speaking peoples. This linguistic unity, though seemingly hidden, is real, which gives us hope that general conclusions might, after all, be possible.

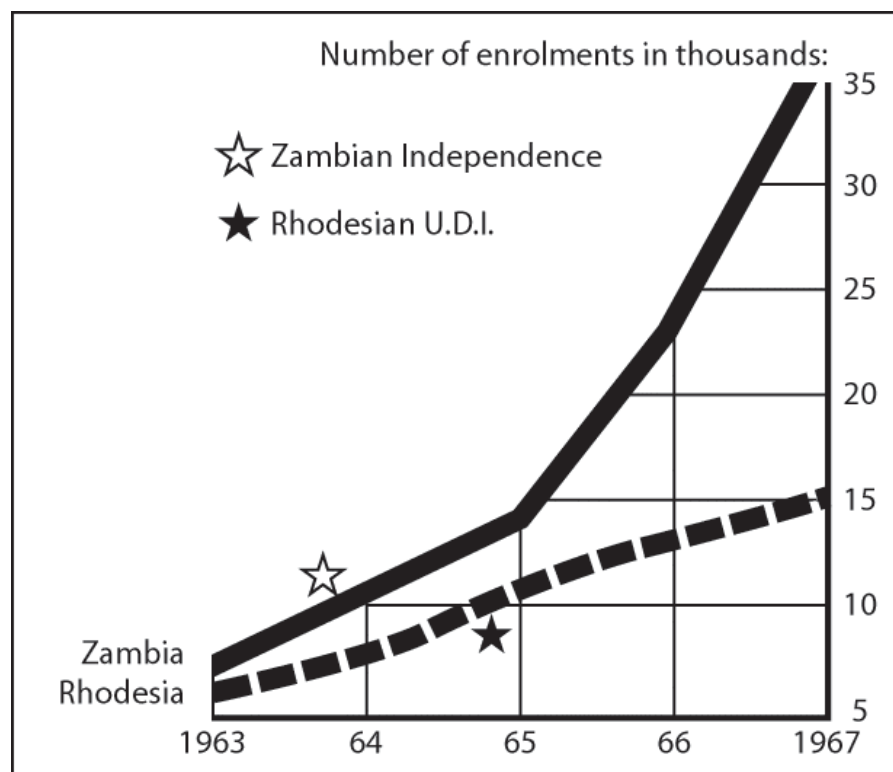
Greater Access to Education

This is a great theme of education in our region. For newly independent countries, with the possible exception of Malawi, greater access to education had a moral impetus that could not be denied.

Educational opportunities had been denied to the African majorities in SADC countries for too long. We have seen how the colonial governments deliberately restricted access to education for fear that an educated populace would challenge their right to continue in power.

In his address “Seminar on Education in Zimbabwe: Past, Present and Future” delivered in 1981, the then Minister of Education, Dr. D. B. Mutumbuka, emphasised that “Education should be mass-based in order to serve the development needs of the masses” (Colclough, 1990: 36).

In fact, Zimbabwe was experiencing the same dilemma that had faced other independent countries before it. For example, examine the graph below:



Dates refer to the end of each year.

Adapted from *Secondary Education for Africans in Zambia and Rhodesia* (1987:187).

In 1966, Rhodesia (now referred to as Zimbabwe) and Zambia were directly comparable. The Zimbabwe population at that time was 4.2 million, while Zambia's population was 3.8 million. This graph shows what happens when an

independence movement espousing mass education achieves power. The increase in the Zambian school enrolments shows a marked increase compared to Zimbabwe. While some nations confronted this issue relatively early, others had to confront it much later.

For instance, Namibia and South Africa were forced to confront the problem of providing greater access to education in the '90s. In South Africa in 1992, the National Education Conference made the following resolutions:

Education is a basic human right, and education and training should be:

- Provided to all
- Extended to all disadvantaged groups

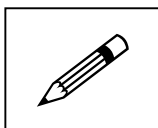
(*The National Education Conference*, 1992: 8-9)

Even countries that have been independent for a relatively long time can not dispense with this aim. For example, smaller countries like Botswana were unable to embark on massive spending campaigns to expand the education sector soon after their independence. However, in the 1996 *Biennial Report* by the Ministry of Education, the Revised National Policy on Education states as its first objective,

to increase access and equity in education and training opportunities (*Biennial Report*, 1996: 2).

Due to the relative strength of the Botswana economy in recent times, there has been a massive expansion in educational spending.

However, we must not assume that the moral imperative of providing what is now regarded as a human right is the only reason for expanding education. Especially in the '80s, one model of economic development put forward the idea that economic growth could be enhanced by expanding the pool of trained workers. It was believed that one of the reasons for under-development was a lack of skilled workers to implement programmes. This view has subsequently been attacked, as economic decline in some countries, most dramatically Zambia in the '70s and Zimbabwe in the '90s, has cast doubt on this thesis.



Self-Assessment 1

1. Why was the expansion of schools after independence a moral imperative?
2. Rhodesian Blacks “have had access to a better quality of education and training than Africans living in other countries with comparable per capital income” (Robins and Shortlidge, 1980: 3, in Cohen, 1994: 310).

What do you think is meant by “better quality of education” in the above?

3. Robins and Shortlidge were trying to defend Rhodesian education. Why do you think they emphasised the point about quality?

Possible answers to this activity are provided at the end of this unit.



Greater Equity of Education

You have already seen that this aim is stated in the *Biennial Report* of the Ministry of Education of Botswana. What exactly is the difference between greater access to education and greater equity of education? In theory, it would be possible to have greater access without greater equity. Equity issues are taken very seriously by SADC governments because of the shared experience of institutionalised racism.



Introductory Activity

Examine the table below.

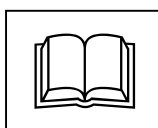
Government Expenditure on Education in Rands, 1965/66			
Ethnic Group	Enrolment*	Expenditure	Expenditure per Pupil
White	19 893	2 675 557	134
Coloured	9 402	680 000	72
Black	66 044	1 333 879	20

*Figures for 1996

Source: Adapted from *South West Africa Survey* (1967: 114-118).

1. How much was the expenditure per pupil for Black and White children?
2. What effect would this have had on Black children's education?

The answers to this activity are provided at the end of this unit.

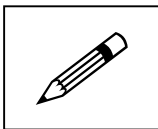


Equity is an emotional subject: it is the cherished hope of the dispossessed and a threat to the privileged. Many believe that not only must children have access to school, but the school must be of sufficient quality to enable them to make the best of the opportunity and get a sound education. Obviously, the children of the wealthy have the benefit of acquiring an education of superior quality. But what about the children of the poor? The Namibian government has been very clear on

this point. The goals of the Namibian Ministry of Education are guided by Article 17 of the constitution:

- Every person shall have the right to education regulated by appropriate legislation sanctioned by Parliament.
- Primary education shall be free and compulsory and the State shall provide all the reasonable facilities to render effective this right for every resident within the territory of the Republic of Namibia.
- No child shall be allowed to leave school until he has completed six years of primary education or until he has reached the age of sixteen (16), whichever be the sooner.
- Everyone shall have the right to maintain private schools or colleges (whether or not funded in whole or in part by the State or any of its organs) provided that:
 - a. Such schools or colleges are registered with a government department in accordance with the law authorising and regulating such registration;
 - b. The standards maintained by such schools or colleges are not inferior to the standards maintained in comparable schools and colleges funded by the State;
 - c. No restrictions of whatever nature are imposed with respect to the admission of pupils or recruitment of staff based on race, colour or creed; and
 - d. The propagation and practice of the ideology of apartheid is prohibited in instruction given to the pupils at such schools or colleges.

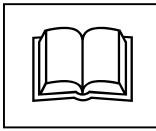
Adapted from Atlas Conference on Education in Africa, USAID AA1 (1994: 79).



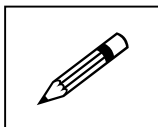
Self-Assessment 2

1. What has influenced Namibia to take a strong position on equitable access to education?
2. Why do you think the Namibian government views the growth of private schools as a threat to its stated policy of equitable access to education?

Possible answers to this activity are provided at the end of this unit.



Let us consider Zimbabwe, which carried out one of the most ambitious expansion programmes in education of all the SADC countries. Immediately after independence, despite being a war-ravaged and relatively under-developed country, the government tried to redress long-standing social imbalances as quickly as possible. Zimbabwe became independent at one of the most tense moments of the Cold War. ZANU-PF, led by Robert Mugabe, and ZAPU – PF, led by Joshua Nkomo, were heavily supported by the Eastern Bloc and China. Therefore, for these parties, free education was an article of faith; it was a national expectation along with land reform and reform of the health system. Abolition of school fees was believed to be one way of ensuring that access to education would be more equitable.



Self-Assessment 3

What type of independence movements will opt for free education policies soon after independence? Give reasons.

Possible answers to this activity are provided at the end of this unit.



Cultural Policy

Colonial education systems had mounted prolonged and consistent assaults on indigenous cultures. As you have already seen, assimilation attempted to destroy local cultures, while segregation denigrated the cultures of indigenous peoples. Independence created the opportunity to formulate education policy that could put right past injustices.

One expression of this desire to revitalise culture was the *Education Sector Survey Report* (1982) recommendation for Lesotho:

To promote, in the various disciplines and through a range of activities, a more thorough knowledge of social and human realities, in particular by drawing to a greater extent on the child's day-to-day experience. This implies the need to restore Basotho's cultural heritage to its rightful place. This means the need to emphasise traditional, social and human values that hold good for the future and national progress. (*The Proposed Five-Year Comprehensive Secondary Education Programme Lesotho*, 1984: 15)

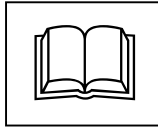
The above reflects a common theme throughout the SADC region. Very often governments sought to preserve culture through changes to the curriculum and language policy. These we will examine closely in the next two units. Whether a formal system can be used to preserve culture remains to be seen.



Self-Assessment 4

How might language policy be used as a tool to preserve culture?

Possible answers to this question are provided at the end of this unit.



Transforming Society by Transforming the Child

Possibly one of the most explicit declarations of the power of education to mould a child into a citizen with certain values and norms is given by Julius Nyerere in the Arusha Declaration of February 1967:

Tanzania subscribes to the notion that there is no such thing as value-free education.
(Mmmari, 1979: 12, cited in Harber, 1989: 57)

It is teachers more than any other single group of people who determine the attitudes of society and who shape the ideas and aspirations of the nation. This is power in reality. (Van Der Muhll, 1979: 23, cited in Harber 1989: 58)

Education for Self-Reliance in Tanzania and Education with Production in Zimbabwe were two attempts by radical governments to change the curriculum to bring it in line with their aspirations. The two programmes will be examined in greater detail in the unit on curriculum. However, they represent two reactions to the perceived inadequacies of colonial education.

After independence, education was perceived as developing children so they could acquire skills suitable for the type of society their leaders envisioned. Education was also a means of making them model citizens with the right attitudes towards work, family, community and country. Of course, Nyerere in the '60s and '70s and Mugabe in the '80s led radical regimes that sought to develop socialist outlooks and collectivism in the young.

Subsequent events have overtaken Education for Self-Reliance and Education with Production. However, even practical and more conservative governments take their roles as the moulders of youth seriously, though their vision of the ideal citizen may be different. For instance, in the *Revised National Policy on Education*, March 1994, the Botswana government declares the following to be one of its main aims:

Effective Preparation of Students for Life,
Citizenship and the World of Work.

The Government is adopting a dynamic Philosophy of Education that promotes economic development, political stability, cultural advancement, national unity and the overall quality of life.

In pursuit of these goals, education must offer individuals a life-long opportunity to develop themselves and to make their country competitive internationally. Ultimately the aim of education must be to prepare individuals for life. (Government of Botswana, 1994: 3)

How is the above different from the vision of Nyerere in the '70s or Mugabe in the '80s? Botswana wants to create an individual who can take advantage of advances in technology and who is productive in the modern marketplace.



Self-Assessment 5

What are the general aims of your education system for developing citizens? Are they collectivist or individualistic?

Possible answers to this activity are provided at the end of this unit.



Summary

The foundation of every system of education is its aims. Sometimes those aims are subverted by difficulties of implementation or they have unintended consequences.

You have seen that policy makers have a vision of what they hope their system will produce. Countries of the SADC region, though diverse, share common legacies of colonialism. We have mentioned some broad themes of their programs to overcome the educational deficiencies that were a legacy of the colonial era:

- greater access to education,
- greater equity in education,
- cultural preservation, and
- social transformation.

The pace, degree and ultimate thrust of these aims will vary according to the circumstances of the country. However, they will surface in one form or another.



Reflection

Choose your favourite subject. Examine the following and try to assess the aims of teaching that subject under the headings below.

- content
- presentation
- underlying themes or messages, such as cultural preservation and social transformation
- greater access to education
- greater equity of education.

?

Unit Test

1. Give the moral and economic arguments for increasing access to education.
2. What common experience among SADC countries influenced the belief that equity was just as important as access?
3. What element of policy is most useful for preserving culture?
4. How did the Cold War and the collapse of communism affect educational policy in SADC?

Possible answers to this test exercise are provided at the end of this unit.



Suggested Answers

Self-Assessment 1

1. The expansion of schools after independence was a moral imperative because education had been restricted under colonial rule and providing education was a way of ending discrimination.
2. A better quality of education refers to higher standards and better teaching and facilities.
3. They had to defend Rhodesian education in this way because it was elitist and only catered to a few people. Therefore, they emphasised quality and not who had access.

Introductory Activity

1. The expenditure on Black pupils was 1,333,879 rands or 20 rands per pupil.
The expenditure on White pupils was 2,675,557 rands or 134 rands per pupil.
2. Black education was underfunded so it was of poor quality.

Self-Assessment 2

1. Namibia took a strong position on equitable access as it tried to overcome the legacy of apartheid. It did not want private schools or colleges to practise elitism and try to exclude Blacks.
2. Private schools are a threat because they are very expensive and most Blacks cannot afford the school fees.

Self-Assessment 3

Radical or socialist independence movements believe in greater access to equity of education. These parties are supposed to be egalitarian, therefore they believe in free education.

Self-Assessment 4

Language policy is a way of preserving cultural identity. Language carries the identity of a people and is the main component of culture.

Self-Assessment 5

By collectivist we mean, do they foster group cooperation? By individualistic, we mean do they concentrate on developing the individual's capacities and talents? Radical or socialist movements are generally more collectivist in outlook.

The actual response to this question will vary depending on the aims of the education system in your country. Do these aims focus on group cooperation and the achievement of common

goals? Do they focus on developing each individual's capacities?

Unit Test

1. The moral argument is that greater access to education is a human right.

The economic argument is that lack of skilled workers retards growth.

2. Institutional racism in the colonialist system was used as a tool so that the Black majority could be oppressed.

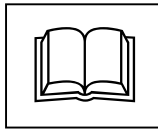
Although some Black children had access to education, the quality of education provided was much worse than that offered to White children.

3. Changes in language policy are probably best for preserving cultural identity.

4. The Cold War influenced education systems because the Eastern Bloc and China supported African nationalism. Consequently, some African countries tried to adopt socialist policies rather than capitalist policies.

The decline in influence of the communist countries meant SADC countries began to abandon socialist models, as capitalism became the preferred economic model.

UNIT 2: Curriculum Development in the SADC Region



Introduction

You have already examined the broad outlines of the aims of education in some SADC countries. Now we must examine how they are put into practice.

Curriculum change is seen as an opportunity to affect the socialisation of children and develop the type of society envisioned by politicians. Below are some approaches to reform.

- The Radical Vision, which was common during the Cold War, hoped to create model citizens.
- The Pragmatic View concentrated on making society productive.
- The Social Conscience View recognises that social transformation is necessary but can be achieved by developing the individual. It does not rely on a collective model such as socialism.

These broad themes will form the content of this unit.

Objectives

After completing this unit, you should be able to:

1. Analyse some elements of curricula of selected countries and show how they are products of national aims.
2. Evaluate changes in curricula.

Why Change the Curriculum?

No doubt you have studied in depth what the term curriculum means. Newly independent countries in the SADC region inherited curricula developed and devised to further educational aims that they did not share.

Often these new governments were radical in nature and wanted to transform their economies. In this category, we will examine Zimbabwe and Tanzania. Obviously, the curriculum in each country was of vital importance for promoting its wider aims.

Even conservative aims that attempt to raise the level of cultural awareness require important changes in the curricula of individual countries. Obviously, the curriculum is the starting point for transforming aspirations into fact.

The Radical Vision of Social Transformation

At the beginning of independence, racial division characterised former colonial countries. Some leaders saw these racial tensions as evidence of deep economic contradictions within the economies themselves. The principal problem was the ownership of the wealth, assets and productive capacities of their countries. The ownership was concentrated in the hands of their colonial masters. Although the key slogan of the independence movements of Zimbabwe was land redistribution, the realities after independence turned out to be different. Radical change was hampered by the Lancaster House Peace Settlement, which sought to protect the property rights of wealthy whites. As a result, the government tried to empower the powerless through education and training.

Education for Self-Reliance: Case Study in Tanzania

Nyerere tried to develop a distinctly African brand of socialism. The key to this social transformation was changing people's attitudes. He also tried to make education more community-oriented:

Education for self-reliance has to increase man's physical and mental freedom to have control over themselves, over their own lives and over the environment in which they live. (UNESCO, 1979: 147)

The prime concern of Nyerere at the time was that education was not satisfying national aspirations. It was elitist. Students saw education as the means of acquiring wealth. It reinforced the idea that white-collar jobs were superior to manual jobs. In fact, formal education was becoming isolated and out of step with the community.

To alleviate these problems, education was to become village-oriented. Schools were to engage in self-help programmes, usually in the school farm-shamba. This had two purposes: to raise funds for the school and to inculcate the proper attitude towards manual work in the minds of the youth.

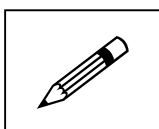
Political education (SIASA) was introduced to replace civics. Here are some of the topics for the primary schools (standards III-VI):

Chama Cha Mapinduzi (the national party):
party flag, party leaders, history of the party,
history of the organisation.

Nation: national flag, national emblem,
national anthem, the uhuru torch, money as a
national symbol, national festivals. (Harber,
1989: 62)

The secondary school curriculum was transformed (form I-VI). Political education was included. One third of the curriculum was taken up by technical-based courses. These were developed in the early 1980s as shown below.

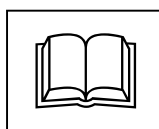
Technical Field	Number of Schools Offering that Field	Subjects
Agriculture	33	Agriculture
Commercial	29	Stores, accounts and secretarial
Technical	16	Plumbers, masonry mechanics, smithing, painting and electrical engineering
Domestic Science	7	Nutrition, cooking, dressmaking and textiles



Self-Assessment 1

1. Examine the subjects offered in the above table. In terms of facilities, why might this programme have been too ambitious?
2. How might the type of subjects offered have made greater access to education difficult?

Possible answers to this activity are provided at the end of this unit.



Case Study: Zimbabwe

You have seen that in Tanzania, the curriculum was believed to be a vehicle capable of teaching desirable values to the young. The curriculum in Zimbabwe was originally meant to support Marxist-Leninist ideology.

Accordingly, the history syllabus was changed to include detailed accounts of the liberation struggle in African states and especially Zimbabwe. Education with Production was supposed to be a compulsory component of school activity, as it was to link theory with practice. Practical projects were supposed to be part of the school routine. In fact, however, Zimbabwe took the school project element of Tanzania's Education for Self-Reliance programme without extending it into the mainstream school programme.

Zimbabwean schools remained heavily exams oriented. Pupils and even school administrators, believed their core activity was passing examinations and Education with Production was viewed as a waste of time, since it was non-examinable.

Zimbabwe had chosen to concentrate on mass education, with the consequence that it had to build schools and staff them as

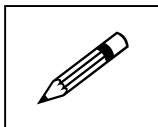
rapidly as possible. It did not have the resources to develop examinable subjects and build infrastructure in order to support the concept of Education for Production.

New Directions for Tanzanian Education

Originally, the Tanzanian model was based on socialist principles. Since 1984, however, cost-sharing and decentralisation have characterised government policy, as it became apparent that the state could not sustain all its commitments to the education sector.

Tanzania returned to concentrating on worker development, as it once did between 1961 and 1967. Now that reliance on industrial training has become out-dated due to the impact of information technologies, emphasis is being placed on science and technology, as well as on developing entrepreneurial skills. The emphasis of previously commercially-based schools had been on slotting pupils into employment. For example, the knowledge and skills obtained in accounts were supposed to enable the pupils to obtain work as account assistants in government service.

Now the Education and Training Policy (1995) has officially replaced Education for Self-Reliance (1967). Its themes are common throughout the SADC region.



Self-Assessment 2

1. What were the major factors in the decline of socialism as a model for educational policy?
2. What was the purpose of introducing political education in Tanzania and Zimbabwe?

Possible answers to the activities are provided at the end of this unit.



The Rise of Pragmatism

Increasingly, SADC countries are conceding that, for better or worse, the world is moving towards greater economic liberalisation and globalisation. Governments feel they must move with the times or be condemned to stagnation or even economic decline.

Case Study: Botswana

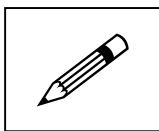
In the 1996 *Biennial Report* of the Ministry of Education, the goals of the curriculum are stated as follows:

- Vocational orientation of academic subjects
- Increasing the number of practical subjects offered
- Emphasising foundation skills applicable to work situations such as problem solving, self-presentation, team work and computing

- Relating the curriculum to the world of work. (*Biennial Report*, 1996: 12)

In order to achieve these goals, there have been some recent innovations. For instance, the report describes a computer awareness programme to be integrated into various subject areas. Another innovation covers environmental education. It addresses ecological concerns that affect the quality of life and national productivity. Educational materials have been produced to cover the following issues within the National Conservation Strategy: rangeland, water pollution, veld products and wood. Other syllabuses that have been prepared to address current issues in the same manner include HIV/AIDS and population and family life education.

This new curricula represent a technocratic triumph over ideology. Previously, curricula had been viewed as having the potential to be the blueprints for developing model citizens of a certain ideological type. Governments are now more concerned with producing productive citizens who can create wealth for themselves so that the state does not have to support them.



Self-Assessment 3

1. Briefly describe what the main goal of the curriculum was for the Botswana Government in 1996.
2. What element mentioned in the case study is most likely to ensure that Botswana keeps up with modern developments?

Possible answers to this activity are provided at the end of this unit.



Case Study: South Africa

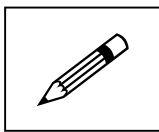
Curriculum 2005 is the national curriculum for South Africa for the 21st century. Professor Sibusiso Bengu, former Minister of Education, writes:

Essentially, the new curriculum will effect a shift from one which has been content-based to one which is based on outcomes. This aims at equipping all learners with the knowledge, competencies and orientations needed for success after they leave school or have completed their training. (*Curriculum 2005*, 1997: 1)

It is interesting that in the case studies we have looked at up to this point, we have emphasised content. Curriculum development has been described in terms of modifying, revising, revamping or in some cases removing material. In this case, the South African curriculum concentrates on what students and society should get from the education system.

There are eight learning areas mentioned in this document. Two of them are summarised below.

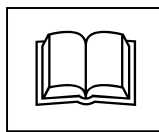
- **Communication, literacy and language learning.**
People interact with the world and each other through language. The more we are able to communicate, the better we are able to understand each other. Improved communication can only lead to a South Africa free of intolerance, misunderstandings and prejudice.
- **Numeracy and mathematics** provide ways of understanding the world. Mathematics encourages logical thinking and problem solving and teaches analytical skills that will equip learners to cope with a rapidly changing technological environment (Curriculum 2005, 1997).



Self-Assessment 4

1. What is the expected outcome of improving communication skills?
2. Do you think that the tolerance mentioned in the document is necessarily the outcome of being able to communicate competently?

Possible answers to this activity are provided at the end of this unit.



Curriculum 2005 seeks to avoid the rigidity inherent in other national curricula. It replaces syllabuses with learning guidelines that offer more flexibility than the previous arrangement.

Teachers will be free to develop their own learning programmes as long as they take into account the various kinds of outcomes and complement the needs of the learners.
(*Curriculum 2005*, 1997: 13)

Another key element of the South African curriculum is its policy on assessment.

All learners will succeed. Time will no longer control the learning process. This means that not all learners will succeed at the same time. Instead, learners will be able to develop at their own pace. (*Curriculum 2005*, 1997: 12)

Assessment will be 'on-going'. According to the Curriculum 2005 document, it will not be based on one-off assessment like a final examination.

The South African curriculum is interesting because it signals a new direction. It is that new direction which we will examine next.

A Different Kind of Curriculum

Previously, we looked at curricula that began with a specific purpose based on what the government wanted pupils to turn out to be. In some ways, the state assumed it knew best. The South African curriculum tries a different approach.

The new education and training system introduces a lifelong education system which is people-centred. (*Curriculum 2005*, 1997: 2)

It does not assume that social change can be brought about by targeting only children. It looks at social change, not as a matter of content, but as a state of mind that needs continual re-adjustment. The focus is not on the materials used in the classroom.

Previously, we have seen that one of the problems of formal education was that it ran counter to the methods employed for education by the societies it was forced upon. Curriculum 2005 introduces an important element from traditional societies – the belief that education is a continuing process of growth that cannot be reserved for certain times and certain places. It is introducing much needed flexibility into the system and it echoes Farrant’s comment that in traditional education there were no dropouts by saying “all learners will succeed” (*Curriculum 2005*, 1997: 12).



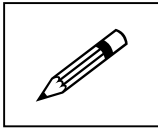
Summary

You have discovered that there have been politically motivated attempts to control curricula for social engineering. This is true of Tanzania and Zimbabwe. However, these attempts were derailed by globalisation and the decline of international communism. Ultimately, the aims of curricula were defined more narrowly in an attempt to improve the quality of skilled personnel.

The fact remains that many countries in SADC, like South Africa, face severe social problems and need to use education in general and devise curricula in particular that not only produce quality education, but also socialise children for the benefit of society. It is due to its potential to promote social cohesion that the education system is viewed as part of a far-reaching solution to South Africa’s ills.

As stated before, one problem with formal education is that it is not comprehensive, like traditional education. Curriculum 2005 is trying to develop a system that is not an endurance test, but a vehicle for growth that does not abandon people

along the way. The statement that “All learners will succeed” marks a departure from the idea that the curriculum first and foremost must be a set of standards.



Self-Assessment 5

1. What makes the South African curriculum different from the other curricula we have studied?
2. In what ways are its aims similar to those of traditional education?

Possible answers to this activity are provided at the end of this unit.



Reflection

Do you think implementing Curriculum 2005 will meet with some resistance from:

- teachers?
- pupils?
- parents?

Why might some of the members of each group dislike it? Do you see the benefit of implementing such a program?



Unit Test

1. Following independence, many countries wanted to change the education system as quickly as possible.
 - a. What did they want the education system to do?
 - b. What impeded their efforts to change the system rapidly?
2. As the SADC countries become more aware of economic liberalisation and globalisation, what topics are being introduced into their curricula?
3. What is the significant distinguishing feature of South Africa’s Curriculum 2005?
4. Briefly describe the elements you would include if you wanted to make a curriculum that was comprehensive like the South African model. Address:
 - content
 - assessment
 - the role of parents
 - the role of pupils.

Possible answers to this activity are provided at the end of this unit.



Suggested Answers

Self-Assessment 1

1. The suggested programme might seem ambitious because some of the subjects require a lot of costly equipment.
2. These technical programmes consume a lot of resources, therefore making expansion difficult.

Self-Assessment 2

1. Socialism declined because of economic hardship in independent countries and the decline of the Eastern Bloc. Socialism was no longer a major force on the world stage.
2. Political education was introduced to create model citizens who would subscribe to socialist principles.

Self-Assessment 3

1. The main goal of the curriculum in Botswana was to enable students to be gainfully employed when they leave school.
2. The introduction of computer awareness will help Botswana keep current with modern developments.

Self-Assessment 4

1. By improving communication skills, one hopes to increase tolerance.
2. Communication is a skill and like any skill it can be used to do good or harm. In this case, the aim of the South African government is to promote understanding among different people.

Self-Assessment 5

1. The South African curriculum concentrates on outcomes, not on the content of syllabuses.
2. It aims to be comprehensive so that everyone is socialised, not merely those who have talents that suit the requirements of formal education. It focuses on success for everyone.

Unit Test

1. a. Each country had different goals for its education system. Some wanted it to be a social agent of change, others wanted it to produce skilled workers who could boost their economy and others wanted people to develop their own potential in a life-long learning manner. Some still believed that the purpose of education was to prepare children to pass examinations

that were originally designed for children in other countries.

- b. The education systems could not be changed rapidly because countries lacked the funds needed to make the changes.
2. New topics being included in the curricula are computer awareness, HIV/AIDS, environmental education and population growth.
3. Curriculum 2005 focuses on learning outcomes.
4. Elements that could be included in the curriculum are outlined below.
 - Content. It must be relevant and skills based so as to enable pupils to develop life-long learning habits and to enable them to learn on their own.
 - Assessment. It must be flexible so there will be no failures. It should allow learners to complete various levels when they are ready. It is ongoing or continuous.
 - Role of parents. They are encouraged to further their own education and contribute to decisions on what children should be taught.
 - Role of pupils. They should participate in decisions about their own learning, what they learn, when they should be assessed and which assessment suits them the best.

Of course, these are just very rough guidelines. You could have written much more.

UNIT 3: Language Policy



Introduction

Normally, language policy would be included under curriculum development. However, in the SADC region, language policy is such a complicated issue that it must be discussed separately. You probably know from your own experience that it is invariably controversial. Language is very important for many reasons, since it can be a:

- source of national pride,
- tool of tyranny used to oppress minorities,
- source of cultural pride,
- weapon of cultural imperialism,
- medium of communication, and
- barrier to communication.

In this unit, we will examine why language is such an important part of educational policy. Language policy has implications beyond the classroom. These implications will be examined in this unit in the hope that common features will be discerned, despite the fact that there are a bewildering number of languages in this region.

Objectives

After completing this unit, you should be able to:

1. Identify the issues that make language policy so important in the SADC region.
2. Explain how certain SADC countries arrived at their language policies.
3. Identify what these countries hoped to achieve by these policies.
4. Discern common features in the diversity of policy responses.
5. Assess the merit of these policies.

Special Issues of Language Policy

This section outlines a number of issues that are directly related to language policy and are particular to the SADC region.

Demography

Countries in the SADC region have a diversity of language groups. With the exceptions of Lesotho and Swaziland, which

have basically one commonly spoken language, the other countries have many different language groups with competing claims.

Effects of Colonial Boundaries

Countries of the SADC region have inherited international borders from their colonial masters that took no account of demographic considerations. Consequently, international borders divide peoples who would otherwise be neighbours and group them together with other language groups.

The Effect of Colonial Administrations

We have already seen in previous units in this module that colonial administrations devised language policies to suit their own ends. Whether they were directed towards assimilation or segregation, language policies were politicised. As a reaction to past abuses, African languages are now being used to assert cultural identity and awaken cultural pride.

Use of Language Policy for Nation Building

If a country contains many language groups, one language may be chosen to facilitate communication between different groups. This language is referred to as the **lingua franca**. Often, a lingua franca is the language of the former colonial master, but not always.

Publishing Industries in SADC Countries

African languages of the SADC region did not have a written form before the arrival of the missionaries and, later, colonialists. Some countries have language groups that still do not have any standardised written form of their language. Some countries have weak publishing industries that are unable to produce large quantities of material in local languages. Even countries with vibrant publishing industries are unwilling to produce certain types of books in local languages.

While writers of fiction may be readily available, writers in African languages who specialise in technical fields are not easy to find. Also, publishers may resist publishing such material because they feel it might be difficult to recover their costs.

The Question of Literacy

Language policy must address the problem of how best to ensure that the population becomes literate. Questions of which language to use in order to improve levels of literacy are of vital importance.

Cultural Awareness

In Unit 3 of Module 17, we mentioned Swazi efforts to promote Siswati. In Unit 4 of Module 1, the promotion of Sesotho was mentioned. In both cases, it was felt that language and, by extension, culture were threatened by foreign and modern influences and needed to be strengthened. Zimbabwe is an interesting case of this type of language policy.

Case Study: Zimbabwe

The 1987 Education Act recognised that English was the language of commerce and international relations. Colonial governments had allowed the teaching of Shona and Ndebele right up to and including university level, but they were not the languages of instruction and were regarded as inferior to English.

English was the medium of instruction and compulsory. Ndebele and Shona were allowed less time on the timetables of schools. They were not needed in business or administration except for translation and were derided as ‘vernaculars’. Local minority languages that were not recognised at all included Venda, Kalanga, Nambya, Nyanja, Tonga, Shangaan and Lozi.

The language policy adopted by the Zimbabwe government was as follows:

- English and Shona or Ndebele were to be given equal time on the timetable.
- The mother tongue was to be the medium of instruction up to Grade 3.
- Five minority languages were recognised and were to be taught in schools: Kalanga, Venda, Nambya, Tonga and Shangaan.
- English, Shona and Ndebele were to enjoy equal status. A full ‘O’ level certificate could have a pass in any of the three languages.
- It was compulsory for children to learn English or Ndebele or Shona. English speakers were to learn Shona or Ndebele as a second language.

These proposals could be defended on two grounds:

- Learning an African language contributed to the revival of national pride and preserved cultural identity.
- Research has shown that children do better when they begin by learning in their mother tongue.

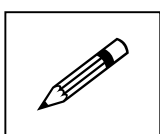
However, Zimbabwe’s language policy failed for the following reasons:

- Equal status for all languages only went as far as the Zimbabwe Junior Certificate (form 2), an examination

that is no longer used to gain employment or entry into any further study.

- Schools continued to devote more time to English than to Shona or Ndebele.
- The government capitulated because of pressure from colleges, the University of Zimbabwe and employers who opposed giving Ndebele and Shona equal status at 'O' level and making a full certificate a pass in any language and four other subjects.
- In 1987, the African Languages Board proposed to offer African literature in Shona or Ndebele. The government declined, saying this proposal was not viable despite the fact that texts are available and literature in English is offered at 'O' level.
- The position on minority languages has hardly changed because the Ministry has been unable to develop materials for them and refuses to import materials for those groups that can obtain such materials from other countries.

Zimbabwean radio, in particular Radio 2, produces material in African languages. Communication in Shona and Ndebele is acceptable in the courts and in Parliament. However, the language policy in schools does not match these situations.



Self-Assessment 1

1. What two reasons were given in favour of the language policies of the 1987 Education Act in Zimbabwe?
2. Why do you think the University of Zimbabwe and business wanted to maintain the status of English?

The answers to this activity are provided at the end of this unit.



Language Policy and Literacy

Any language policy must begin by ensuring that children become literate. The situation is confused by the fact that English has become a vital part of life in many former British colonies. In this regard, the *Zambian* experience is instructive.

Case Study: Zambia

The Zambia National Reading Committee (1997) conducted a study that showed that 60% of *Zambian* Primary School pupils completed 7 years of primary school with little or no skill in reading in either English or a local language (Tambulukani et al., 1999).

What was the origin of this problem? In 1965, *Zambia* introduced English as the medium of instruction beginning in Grade 1. According to studies, the reading problem was a language problem. Pupils learn better in their own language; it

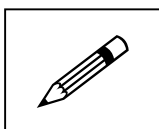
reinforces self-esteem. Beginning by teaching in the children's mother tongue makes learning more enjoyable because they do not have to struggle with a foreign language. The acquisition of another language is easier once children can read and write in their first language.

Language policy in Zambia has subsequently shifted in line with the goals of improving literacy in the mother tongue. The government has implemented the following measures:

- The time allocated to Zambian languages was increased.
- The status of local languages was improved. They are now counted among those subjects necessary for Grade 8 (secondary school) selection.
- Initial literacy in Grade 1 is to be developed through a language familiar to the child. Basic literacy in English will be developed in Grade 2, the second year of primary school.

In the Zambian case, the primary motivation for promoting local languages was practical. It would appear that not only does this increase literacy levels, but it also raises competency in English.

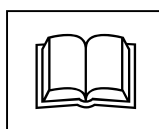
Zambia has 7 official local languages and 73 varieties and dialects. It would appear that no local language could become a lingua franca, thus Zambia has begun to promote local languages in an effort to improve the standard of English, which will be used as a lingua franca for the foreseeable future.



Self-Assessment 2

1. Why did it appear necessary to use English in Zambia as a lingua franca?
2. What is the best way of learning English for non-English speakers?

Possible answers to this activity are provided at the end of this unit.



Language Policy for Nation Building

The choice of an official language may depend on the political situation in the country. Namibia illustrates this point.

Case Study: Namibia

The Ministry of Education and Culture recognises the following as national languages: Afrikaans, German, Nama/Damara, Khoeokhoegowab, Oshikwanyama, Oshindonga, Otjiebero, Ruciriba, Rukwangali, Silozi, Setswana and Thimbukushu. Although Afrikaans is the mother tongue of 15% of Namibians, it has been considered the lingua franca of the nation, especially in the urban areas.

However, according to a language usage survey reported by UNESCO in 1995, Namibians questioned its status as a lingua franca in a survey of students with the following home languages: Afrikaans (24.1%), English (0.8%), German (3.7%), Otjeherero (14.8%), Rukwangali (1.9%), Silozi (27.8%), Nama/Damara (20.4%), Setswana (3.7%) and Oshiwambo languages (3.7%). The following results were obtained from the survey:

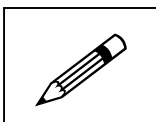
- 89% of respondents believed English was the most important language for their advancement, and
- 87% wanted to see English as an official language of Namibia.

It would seem from the above that Afrikaans was not favoured as the official language. Perhaps this was because Afrikaans was considered to be the language of the oppressor.

The *Language Policy Document* of the Ministry of Education and Culture (1991) proposed the phasing in of English, so that it would be the medium of instruction in all grades above Year 3. English is now a compulsory subject throughout the school system.

In Namibia, it has been recommended that a child should be taught in the mother tongue or home language during the child's early years. To this end, support for the home language is required. Nevertheless, metropolitan languages such as Afrikaans and German enjoy high status and are better provided for in terms of literature, materials, financial support and trained teachers.

Indigenous languages do not have as much support. If multilingualism is to be a success, these home languages must be given the same status and receive the same support as metropolitan languages.



Self-Assessment 3

1. Why was Afrikaans the lingua franca of Namibia?
2. Why did it not receive widespread support as the official language?
3. What is the greatest threat to the success of multilingualism?

Possible answers to the above questions are provided at the end of this unit.



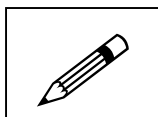
Case Study: South Africa

In South Africa, the issue of an official language is very sensitive. After four decades of 'bilingualism', South Africa has opted for 11 official languages and a policy of multilingualism.

This position is given in the Curriculum 2005 policy document of 1997. According to this document:

- No public school can discriminate on grounds of language.
- Learners have the right to choose their language of instruction where practical.
- Governing boards may choose the language policy of the school provided it does not conflict with provincial policy and national policy.
- All schools must offer at least one approved language in Grades 1 to 3.
- All schools must offer at least two approved languages beginning in Grade 4.
- All languages must receive equal allocations of time on the timetable.
- Promotion from Grade 1 to 4 must be assessed on performance in one language and mathematics.
- From Grade 5, the criterion will be a pass in one language.

The South African policy is a departure from other policies in the SADC region. In theory, there could be 11 equally powerful and widely used official languages. However, in reality, it is probably true to conclude that English will retain a high status because it is used internationally and dominates popular culture. It will also be the medium of instruction in institutions of higher learning.



Self-Assessment 4

1. What is the lingua franca in South Africa?
2. How does the South African option avoid conflict between language groups?
3. What is required to implement multilingualism successfully with all 11 official languages?

Possible answers to this activity are provided at the end of this unit.



Summary

Language policy touches on many issues and is potentially very controversial. On a purely practical level, if literacy levels are to be improved, then instruction in home languages is indispensable. Most countries recognise this but they failed in the execution of the idea because they were unable to support local languages with the necessary teaching resources.

However, for some countries, such as Namibia and South Africa, language policy is a vital instrument for building the

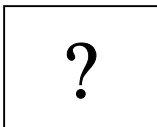
state. Namibia has chosen a language few people speak in its country to avoid friction between different groups. South Africa has chosen, in essence, everyone's language. It remains to be seen whether these policies will be successful. We hope that this unit has stimulated your interest and curiosity and that you will explore the issue of language policy in education further.



Reflection

Now that you have completed this unit on language policy in education, you should consider the following:

- How has the language policy in your country helped or hindered you in teaching reading and writing in the home and official languages?
- To your knowledge, has an able student in the sciences been hindered by the medium of instruction?
- Has the career of one of your pupils been crippled because he or she failed English, although he or she was perfectly able to communicate in English in other subjects?



Unit Test

1. What was the biggest problem caused by Zambia's language policy of 1965?
2. How did that policy change in the '90s?
3. Why were Shona and Ndebele never able to attain the same status as English in Zimbabwe?
4. Why did Namibia choose English as the official language?
5. How is South Africa's policy of multilingualism going to operate in schools when there are 11 official languages?

Possible answers to this test are provided at the end of this unit.



Suggested Answers

Self-Assessment 1

1. Zimbabwe's language policies were educationally sound because children learn better in their mother tongue and this elevated African languages to equal status with English, thus developing national pride.
2. The University of Zimbabwe and business were afraid of the decline in the standard of English. They represented an English-speaking elite who probably did not want African languages to gain equal status. Note also that most educational publications are in English and that English has become a primary language in international business.

Self-Assessment 2

1. Since there were so many languages spoken in Zambia and none of them appeared likely to be spoken across the country, English became the lingua franca.
2. It is easier for non-English speakers to learn English if they become literate or competent in the mother tongue first.

Self-Assessment 3

1. Afrikaans became the lingua franca of Namibia because it was the language of the last colonial regime.
2. It was perceived as the language of the oppressor.
3. If the home languages, which are not metropolitan languages, do not receive enough support, their teaching will be sub-standard and so will be their status.

Self-Assessment 4

1. There is no official lingua franca in South Africa because there are 11 official languages.
2. It gives all languages equal status.
3. All languages must be supported with materials and teachers. The languages must be used regularly by people who are learning them.

Unit Test

1. Zambia made English the medium of instruction, neglecting the mother languages. This had a negative effect on literacy.
2. The government realised that children must start school by using the languages they know, then learning English.
3. The policy of the government was challenged by pressure groups, including the university, which argued that a full 'O' level certificate should require English. The African languages did not receive enough support. For instance,

African literature was not introduced as a separate subject. Therefore, Shona and Ndebele did not attain the same status as English.

4. Namibia had many different language groups and the prevailing lingua franca was regarded as the tool of the oppressor, so English became the official language.
5. The element of choice by the learner is the key point. The pupil can choose any one of the 11 languages as a first language and any one of the other 10 as a second language. The learner will be bilingual by choice and any number of combinations are permitted.

UNIT 4: The Education Delivery System



Introduction

The delivery system is at the heart of comparative education. It is therefore surprising that this topic is often avoided by writers. As a practising teacher, you will find this unit quite helpful because it focuses on where things actually happen or do not happen – the school. Note, however, that the school is a complex system comprising many inter-dependent parts that must work together for the effectiveness and efficiency of the whole system.

This unit aims to help you isolate and integrate elements of the school delivery system. You will also learn about new trends designed to enhance the performance of the delivery system.

Objectives

After completing this unit, you should be able to:

1. Identify the elements of the education delivery system.
2. Assess the designs of the delivery system.
3. Describe problems related to the delivery system.
4. Appraise the committee approach to improving the delivery system.

Policy Reform Problems in SADC Countries

Policies on education across the SADC region are often merely expressions of the intent to change or reform education systems. Their common element is the declaration of education as a basic human right; hence, its democratisation as well as the expansion referred to in past units. A brief look at reform policy problems introduces the topic of education delivery.

UNESCO (1995: 22) looks at a reform as “a progression towards a target which fascinates by its very nature, but it is also a point of departure”. This means that reformers must know not only where they are going, but also where they are and how they will get where they are going. This may appear very simple but note that by nature, educational reforms are very complex. Some have no effect, no matter how well they are thought out. Some have unforeseen effects, at times even contrary to their original intentions. In other cases, the internal dynamics of reforms recreate the imbalances they were originally intended to remove. There are other reforms that take off like a veld fire, affecting the whole system, but whose origins cannot be traced to any factor within the system.

Think about the reforms that have taken place in your own country. The complex nature of reforms is further compounded in the SADC region by the peculiar circumstances that existed at independence. It is very tempting to blame the failures of these countries on planners. But you should note that in addition to the built-in risk of reforms referred to above, UNESCO (1995: 21) concludes that:

a political decision catches planning services by surprise, before they have provided data or various alternatives accompanied by timetables and costs, that would make it possible to weigh pros and cons before taking a decision.

A close analysis of the delivery systems will reveal the following in countries that experienced liberation wars:

- Thousands of children and youth are demanding education, especially those who lost out during the war.
- The manifestos of liberation movements include high-profile promises related to education.

How does one balance the need to slow down decision making in order to come up with viable reforms with the resounding cry to act quickly after liberation?

Furthermore, a casual look at the proposed reforms will reveal that they seem to be quite 'appealing'. The following may be familiar to you:

- Democratising the education system.
- Increasing access to disadvantaged rural communities.
- Reforming policies and practices of a racially-based system.
- Updating curricula to suit the local culture and needs.
- Improving community involvement in education.
- Utilising peer networks for education.
- Utilising the school system as an extension service for other social development aspects.

Is this not impressive? Coleman (1995) identifies the criteria of success for educational reforms as:

- a broad appeal to win the support of ideological and political opposition, and
- promises made to benefit students, the community and government.

But Coleman adds that reforms should not jeopardise the gains of the past. Maybe the last point must be checked across the region. UNESCO (1995: 22) asked:

How can one state (of education) be replaced by another while the machine is in operation, while pupils are in the classroom, while buildings are being erected and the budget is being adopted?

This questions the haste with which reforms are undertaken.



Self-Assessment 1

Are all educational reforms successful? Explain your response.

Answers are provided at the end of this unit.



Obstacles to Implementing Reforms

When you examine past attempts at reforming education in your country, you will notice that those efforts met with a number of obstacles:

- lack of uniformity of development in different economic and social areas,
- mismatch between the cost of proposed reforms and the ability to pay,
- accelerated enrolment,
- training of teachers,
- development of appropriate and sufficient infrastructure, and
- provisional educational material industries.

People can develop to high levels in one area, such as the economy, while educationally they remain low. Look around the region. Some very vibrant economies have a long way to go educationally. Others with highly-skilled professionals have very weak economies that result in the so-called 'brain drain' which pushes these economies further down. The mismatch between the cost of reforms and the ability to pay seems to be the major setback in Sub-Saharan Africa. Lack of finances cripples the delivery system. Funds are needed for management capacity building, training teachers, the erection of buildings and the procurement of learning materials.

The challenge for you at this point is to find out how each of the SADC countries responded to the problem of classroom and teacher shortages. You may consider, for example, the strengths of the Zimbabwe Integrated Teacher Education Course (ZINTEC) as an innovation in this regard.

As a result of the above problems, UNESCO (1995: 27) argues that:

despite progressive movement towards mass education, a climate of relative penury, qualitative shortages and persistent inequalities continue to exist alongside increases.

Within the same countries, some children move from an air-conditioned house into an air-conditioned car to an air-conditioned classroom while other children walk along dusty country roads to reach crowded multigrade classrooms in schools with no electricity. These differences between various groups serviced by educational institutions cause stresses and strains within that system. A comparative study of how other schools cope with these types of situations might be helpful.

The School as the Centre of the Delivery System

A number of structures may be in place in addition to the support services provided, but the school is where education takes place. The quality of the school determines the quality of the product – its graduates, who eventually go to higher institutions of learning, the world of work or the world of crime and poverty.

Dimensions of the School as a Delivery System

The school has a number of dimensions that work together to achieve the goals for which the school system was established. Coleman (1995: 1) concludes that:

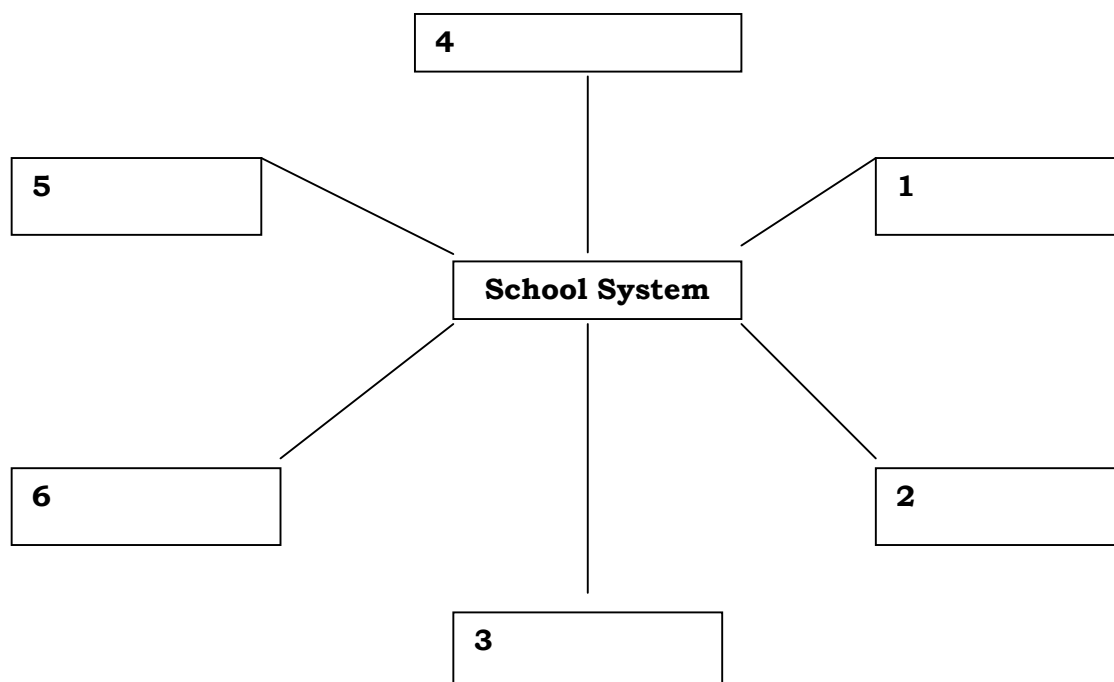
How well these dimensions operate, separately and in tandem, determines whether a school achieves its aim of preparing students to live independently and to contribute to adult life.

The general feeling is that the school systems in the SADC region are not as successful as they should be. Let us now look at the dimensions of school delivery systems and see where the problems could be. To prepare you for the next section of the unit, complete the activity below.



Introductory Activity 1

Complete the diagram by listing the stakeholders in the school system.



Possible answers to this activity are provided at the end of this unit.



The involvement of so many people and organisations implies that the school must operate within set structures, such as:

- organisational structure, which is usually a hierarchical arrangement of people;
- division of labour, which indicates who does what;
- rules and regulations;
- philosophy or mission; and
- school charter.

Secondly, the school system organises the student body by:

- grading for instruction,
- age groups for sports, and
- performance for promotion.

Third, the schools set classroom processes for the students' cognitive and social learning. They arrange for maximum benefit and try to remove all learning obstacles. Within the resources that are available, schools attempt to provide quality instruction by hiring qualified teachers who use current and

effective learning materials and instructional media in a safe and stimulating learning environment. The school is where all the theory and political ideology meet reality.

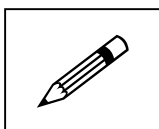
Schools cannot function without money. Therefore, the fourth and probably most important dimension of the school delivery system is the community. It provides the school with the children to teach as well as finances to support the school's activities. Generally speaking:

- The bigger the community, the bigger the school.
- The richer the community, the richer the school.
- The opposite is equally true.

Therefore, where post-independence reforms are seen to be failing, it is worth asking, what is the community like? This is not an attempt to blame the community for the school's shortcomings. Note this:

Persistent resistance to reform, whether that of the teacher, that of the students or that of the rural population, is sometimes a way of voicing an opinion when the debate did not take place at the proper time. (UNESCO, 1995: 2)

The point is that communities should not be taken for granted. They matter just as much as any of the other stakeholders, if not more. Their role in educational policy making and implementation is one area you may wish to pursue further.



Self-Assessment 2

1. List the characteristics of educational reforms that make them difficult to implement.
2. List the limitations confronting delivery systems that were required to provide mass education after independence.

Possible answers to this activity are provided at the end of this unit.



Towards an Achievement Ethos

The school can be likened to a manufacturing organisation; the quality of its product depends on the quality of its inputs, processes and quality controls. In this analogy:

- Inputs are the learners (primary inputs), instructional materials and teacher expertise.
- The process comprises the actual learning or teaching exchanges.
- The products are educated students.

- Quality controls are supervisory functions and the examination system.

Theisen et al. (cited in Albatch and Kelly, 1995: 41) state that:

even when social content and institutional resources (inputs) are controlled, substantial variations exist in the organisational operation of schools, as well as the regulation of learning behaviour within classrooms.

You may find it worthwhile to consider the following:

- the nature of the teachers' authority
- relationship with learners
- openness of classroom decision making
- degree of formality.

Although quite subtle, the effects of these elements of the classroom teaching and learning environment on subject-specific achievement have been demonstrated as statistically significant. You may want to investigate these further within your education system.

Theisen et al. (cited in Albatch and Kelly, 1995: 41) further notes that:

when differences in the physical characteristics of the facilities are placed along side...socially and culturally prescribed relationships between students and teachers, it is safe to conjecture that...configurations of environmental characteristics within the schools bear substantially on achievement.

All this is meant to point to what takes place at the school as the heartbeat of the delivery system. All the stakeholders listed earlier must adopt an achievement ethos and be actively involved in providing resources and support.

Structural Design of the Delivery System

The structure of the delivery system, referring to the working arrangements on the ground, can be either administratively or output driven. Traditional structural designs in the SADC countries are administratively driven and are consequently bureaucratic. Power begins at the very top and is delegated in ever smaller doses down the ladder of administrative functionaries.

Deciding whether to adopt an administrative design or an output design is dependent on questions of accountability:

- To whom is the school system answerable?
- To whom are individual functionaries in the system answerable?
- Are these authorities close enough to the delivery system to audit the accountability of the school system?

Comparison of Administratively-Driven and Output-Driven Designs

Primarily, we are distinguishing between an administrative discipline and a market discipline. Teachers, school heads and schools have been seen to satisfy administrative requirements:

- submitting necessary returns,
- accounting for all money given,
- ensuring records are kept and timetables are followed, and
- following all statutory instruments.

However, they still are not graduating well-educated students in reasonably large numbers, hence the need for change. The pressure for this kind of shift is being felt across the SADC region. Coleman (1995: 13) points out, “This implies an internal organisational structure that replaces in at least certain aspects administrative authority with the authority of the market.” That is, moving away from being administratively driven towards being market driven. Market discipline demands that the output value should exceed input and production costs. Breaking the feedback chain ensures quick corrective measures aimed at quality production. Furthermore, output-driven designs are linked to worker incentives. They have also led to the adoption of performance management systems by Namibia and Zimbabwe. Other countries may eventually follow.

Coleman (1995), who examined the Japanese automobile assembly line, notes the following:

- introduction of rights into the workplace,
- the right to reject inputs that do not meet specifications,
- the right to reject the product, and
- the right to a performance pay scale.

What might result if an education system adopted some of the above rights?

Let us now look at the distribution of these rights and their inherent responsibilities. The rights and responsibilities that are ordinarily held by line foremen or supervisors are instead held by a group called a **Quality Control Circle**. This is a group of equals whose activities complement each other. They reject input materials and components that do not meet

specifications and thus affect the quality of production and, in turn, their salary.

The right to reject materials belongs to the individuals whose performance depends on those materials. All these rights are tied to the responsibility to ensure that one's product satisfies set standards. For instance, worker B has the right to reject worker A's work, thus affecting A's production targets and pay and in turn the whole group's bonus.

The school, you will agree, is different from manufacturing firms but still owes its stakeholders, including the students, quality service. In the school system, the following are contentious issues:

- Who are the workers in a school system? Is it the teachers or the learners? It cannot be teachers alone because learners are not passive clay in the teachers' hands.
- Can we include support and administrative functionaries and what is the cut-off point? If you include the head, why not the District Education Officer? The list goes on.



Introductory Activity 2

Think about the model derived from the Japanese automobile industry and apply it to an education system. Identify:

- inputs,
- workers,
- customers, and
- allocation of rights to quality circles in the education system.

Is this model appropriate for education systems?

Possible answers to this activity are provided at the end of this unit.



The output-driven structure demands that achievement norms be developed to involve all stakeholders. It must promise them all some benefit. For the government, reduction of the civil service budget; for the teachers, commensurate remuneration; for the community, customer satisfaction; and for the students, better chances for higher education and work. In Zimbabwe, for example, school heads are now involved in the recruitment of teachers. To do this successfully, they must make their schools attractive to well qualified teachers.

This structure also demands a review of student assessment rankings to incorporate the concept of added value – a measure of the school's contribution to the student's baseline

performance – in addition to the student’s summative scores at the end of a set period. To infuse the competition motive into the system, contests are held at school, district, regional and national levels in which all are rewarded:

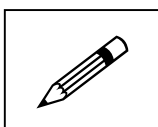
- Teachers gain prestige and market value.
- Schools attract high-calibre students and teachers.
- Students win prizes.
- Parents become proud of the children’s achievements.
- The nation gains a productive and competitive work force at the end of the road.

There are many aspects of this model that may be appropriate for education systems, but it is necessary to ask to what extent do we want to introduce competitiveness rather than cooperation in the school system.

The model described above is linked to the local management of schools (LMS) concept or committee approach. Various committees are established at school level to look into various aspects of the delivery system.

- **Staffing committees** handle staffing structures and local level incentives, the sharing of curricular responsibilities, staff appraisals and interviews.
- **Premises committees** handle issues related to the establishment and use of school premises.
- **Curriculum committees** review the curriculum, ask questions and advise local staff.
- **Educational materials procurement committees** acquire or develop material to support instruction.
- **Pupil welfare committees** look into matters related to the welfare of pupils, including school rules, attendance and suspension regulations.

It is important to note that these committees involve all the major stakeholders mentioned earlier and that they are guided by a set of rights and responsibilities, distributed in a manner that enhances achievement. Your task as a student of comparative education is to follow closely these new developments as they arise.



Self-Assessment 3

How does the output-driven model involve stakeholders in the education system?

Possible answers to this question are provided at the end of this unit.



Summary

This unit has focussed on the delivery system, which is the heart of the education system. It outlined obstacles besetting the implementation of educational reforms in the region. These were identified and classified as those related to the complex nature of reforms in education, those related to hasty implementation prior to the establishment of a conducive learning environment and those related to a number of mismatches between intentions and capabilities. Furthermore, you were exposed to two designs of the delivery system, namely the traditional administratively-driven design and the contemporary output-driven design.

The local management of schools (LMS) concept was also highlighted as one approach for involving all of the school's stakeholders in its operation and activities.



Reflection

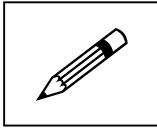
Think about your school's delivery system. Is it working as well as it should? Can it benefit from the output-driven design or the local management of schools concept?



Unit Test

1. Describe four inherent risks of educational reforms.
2. What do you note as a problem with politically motivated reforms?
3. What are some obstacles to implementing educational reform? List at least four obstacles.
4. Identify the key dimensions of the school delivery system.
5. What are the key differences between administratively-driven and output-driven structural designs?

Possible answers to this activity are provided at the end of this unit.



Suggested Answers

Self-Assessment 1

Despite promises and planning, all educational reforms are not successful. Some have no effect, others yield unforeseen effects, some may re-create the problem they were designed to eliminate, and others may affect the whole system instead of the part they were implemented to correct.

Introductory Activity 1

Below are some of the stakeholders you could have added to the design. The stakeholders could be listed in any order.

1. learners
2. parents
3. teachers
4. government
5. institutions of higher learning
6. pressure groups.

Self-Assessment 2

1. Educational reforms can be difficult to implement because:
 - the effects are unpredictable,
 - they might meet unforeseen resistance, and
 - they do not solve all the problems, thus expectations are not met.
2. The delivery system may be limited by the lack of resources, the inability to adequately plan and manage reforms and the sudden rise of demand.

Introductory Activity 2

Below are some possible answers:

- Inputs: teachers, students, learning materials
- Workers: teachers and pupils
- Customers: higher institutions of learning and the community as a whole
- Allocation of rights may involve rejecting children who are not prepared to do work at a particular grade level.

A correct answer does not exist for the question, “Is the Japanese model appropriate for education systems?” However, do consider that teachers in a school can operate as a quality control circle, as they can determine how students are

educated and who meets the appropriate standards for graduation. But teachers in public schools rarely have the opportunity to decide who may be admitted to their school or classes. Teachers can have a significant effect on how students are educated and it is their duty to help students to the best of their abilities regardless of the amount of funding provided to the schools and the availability of learning materials.

Self-Assessment 3

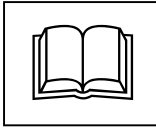
The output-driven model involves stakeholders in every major decision that affects the school and pupils. For example, stakeholders would be involved in selecting entry requirements, appraising teachers and revising the curriculum.

Unit Test

1. Educational reforms may:
 - have no effect, in spite of good planning;
 - have unforeseen effects that are sometimes contrary to the original intentions;
 - recreate the imbalances they were intended to undo;
 - be introduced into the system by unknown forces; and
 - affect more than what was intended.
2. Politically-based reforms often catch the planners by surprise. Politicians do not give planners enough time to provide decision-making data, alternatives, timetables or costs.
3. Obstacles that may inhibit educational reform include:
 - lack of funds;
 - lack of trained teachers;
 - lack of appropriate learning and instructional materials in the language that is needed;
 - lack of facilities, especially those needed for practical, technical or computer courses;
 - mismatch between what is intended and what can be achieved;
 - accelerated enrolment;
 - lack of uniformity in development across the country; and
 - insufficient time for planning and implementation due to the pressure of popular demand for reforms.

4. The key dimensions of the school delivery system are learners, teachers, parents, the community, the government, employers and institutions of higher learning.
5. The administratively-driven design is bureaucratic, administered by a central body and governed by set rules and regulations. Output-driven designs are democratic, performance-centred and governed by a set of rights and responsibilities related to the quality of the product.

UNIT 5: The Administrative and Supervisory Structure of a National Education System



Introduction

Module 17 noted that education systems have a structure that cascades from the national level down to the delivery system at the school level. This unit describes this structure as it pertains to some countries in the SADC region. It also indicates the functions of some of the components of the structure that work together to achieve educational aims.

Objectives

After completing this unit, you should be able to:

1. Describe the education system as a multilevel organisation.
2. Identify functions of each component in the structure of the education system.
3. Compare the educational structure of different countries in the region.
4. Assess the effectiveness of the structure of your own education system.

The Structure of an Education System

The education system is established for a purpose. It employs many people that it positions along set arrangements or structures.

According to Gross (1964) in Beach and Reinhartz (1989: 33), an organisation is characterised by:

- shared goals or purpose,
- sense of belonging,
- continuity of interaction with a degree of regularity and channels of communication,
- differentiation of functions with specialised roles for members, and
- conscious integration of organisational goals so that the components of the organisation are held together by their deliberate efforts to achieve similar goals.

With this in mind, it should be clear to you that the education system is an organisation comprising many people who are focussed on achieving educational aims. It is how well these people work, as individuals and as groups, that determines the degree to which the education system achieves its goals. It is also the arrangement or structure of the organisation that determines whether it is efficient and effective. The bottom line is cost effectiveness, ensuring that the yield is more than the cost. A number of concepts in the subsequent text are borrowed from the world of business.

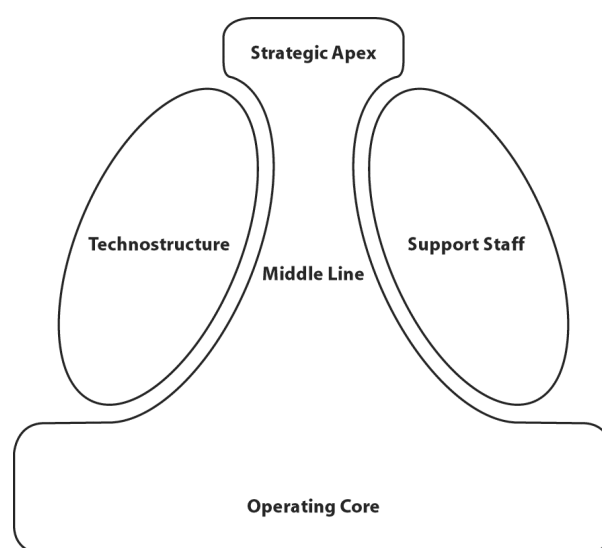
Beach and Reinhartz (1989: 38) note that, “from this perspective, structure and control are the primary mechanism for bringing about instructional change within the school organisation”.

This brings in the idea of bureaucracy. Certain features make an organisation a bureaucracy:

- division of labour
- hierarchy of authority and power
- written rules and regulations
- impersonal interaction between people
- long administrative careers based on seniority and qualification.

Now, pause and think about your school or the whole of the education system. Which characteristics make your school a bureaucracy?

The diagram below illustrates the basic structure of large organisations like the Ministry of Education in your country.



Adapted from Mintzberg, H. (1983). *Structure in Fives: Designing Effective Organizations*. Englewood Cliffs, NJ: Prentice Hall.

Depending on the business of the organisation, the five sections have different levels of prominence. The technostructure and the support staff provide expertise and services not readily available from the teaching professional body. The middle line is the operating core through which policies flow down from the strategic apex.

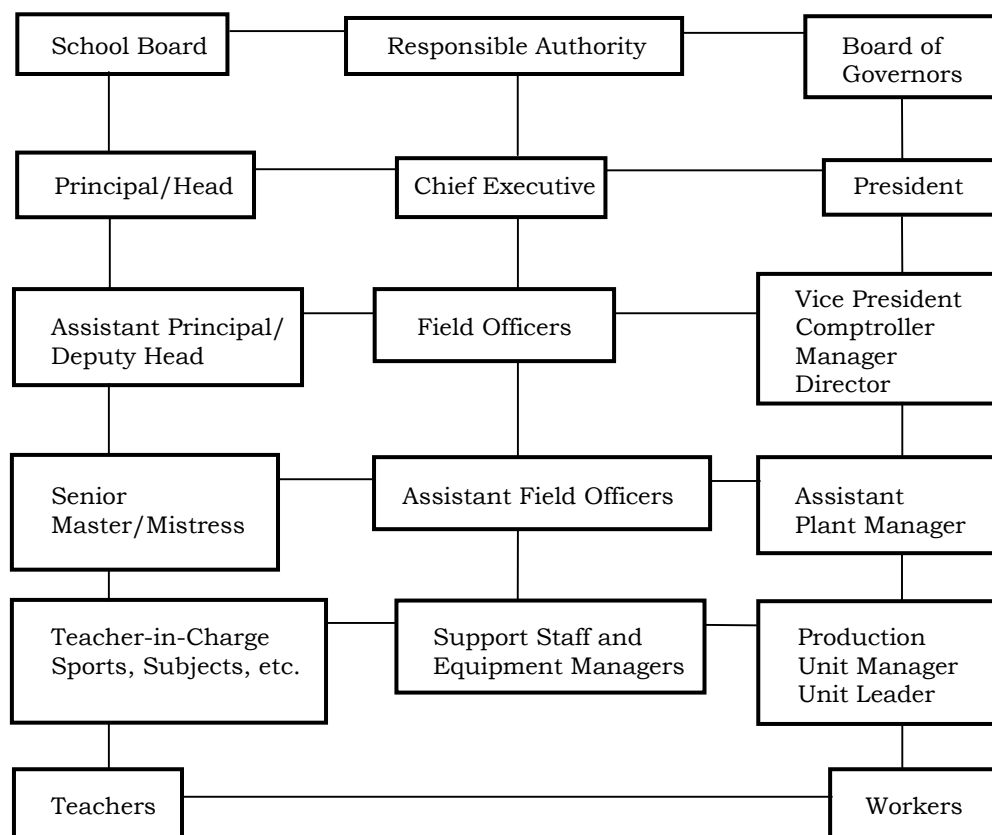
Can you identify which people or professions occupy the technostructure and the support service in the structure of your education system? During financial difficulties, it is these two sections that are usually sacrificed. As a student of comparative education, you must be sensitive to the roles of both the technostructure and support services. Imagine, for example, how the school system would function without typists, or without maintenance and catering staff in the case of a boarding school. The absence of these staff members can jeopardise the well-being of teachers and pupils.

Now let us look at the flow chart below.

Parallel Organisation in Education and in Business

EDUCATIONAL POSITION

CORPORATE POSITION



The above simplified presentation should help you compare a business and an educational structure. You know, however, that education systems employ thousands of people spread over large distances. There is therefore a need for lines of communication. As shown here, the teacher must pass through two levels of communication before reaching the assistant principal or deputy head. Thus the channel of communication has two levels between the teacher and the deputy head. What is it like at your school? Generally, the larger the organisation, the longer the chain of command and the longer the communication channel.

Bureaucracies are characterised by impersonal relationships. This is meant to enhance efficiency. However, you will realise that smaller organisations are not that impersonal. What is the situation like at your school?

Another feature of bureaucracies is a dependence on paper work. Ask your school head how many returns the school office must send to the higher office. These returns communicate information related to decision making as well as that related to school performances.

Bureaucracies have rules and regulations that are helpful in ensuring fairness. However, these rules and regulations limit the discretionary powers of educators at the school and classroom levels. What rules do you consider are an impediment to effective school and classroom practices?



Self-Assessment 1

1. Name the characteristics of the school that make it an organisation.
2. List the common characteristics of bureaucratic organisations.
3. What are the five basic parts of an organisation as outlined by Mintzberg (1983)?

Possible answers to the activity are provided at the end of this unit.



Bureaucracy and Jobs

The education system, as you may know, is a very large employer. The questions you may want to ask are:

- Is that commitment not expensive?
- Does it really help the system?
- Which functions can be eliminated without upsetting the smooth running of schools?

Regarding the first question, Zimbabwe has been allocating the largest part of the national budget to education. Of this amount, 95% goes to salaries. What percentage of the education budget goes to the salaries of teachers in your country?

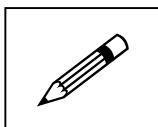
The desire to streamline the civil service, under which the Ministry of Education falls, is common across the region. You may therefore benefit from the suggestion that the aim is not to create jobs in the bureaucracy but to enhance the effectiveness and efficiency. Job-related decisions should be based on:

- identified needs,
- a job description which outlines what the job holder will do on a day-to-day basis, and
- a job title that specifies the position of the job in the hierarchy.

Consequently, the jobs that should be abolished are those that:

- duplicate functions,
- can be delegated without overburdening the person to whom the job is delegated, and
- can be eliminated without affecting the system adversely.

It is also not beneficial to appoint field officers without allocating them the means to do their work, such as cars, telephones and finances to implement programmes. Until the time arrives when money is available to help them work, there is no work for them. Consequently, their positions should not be filled.



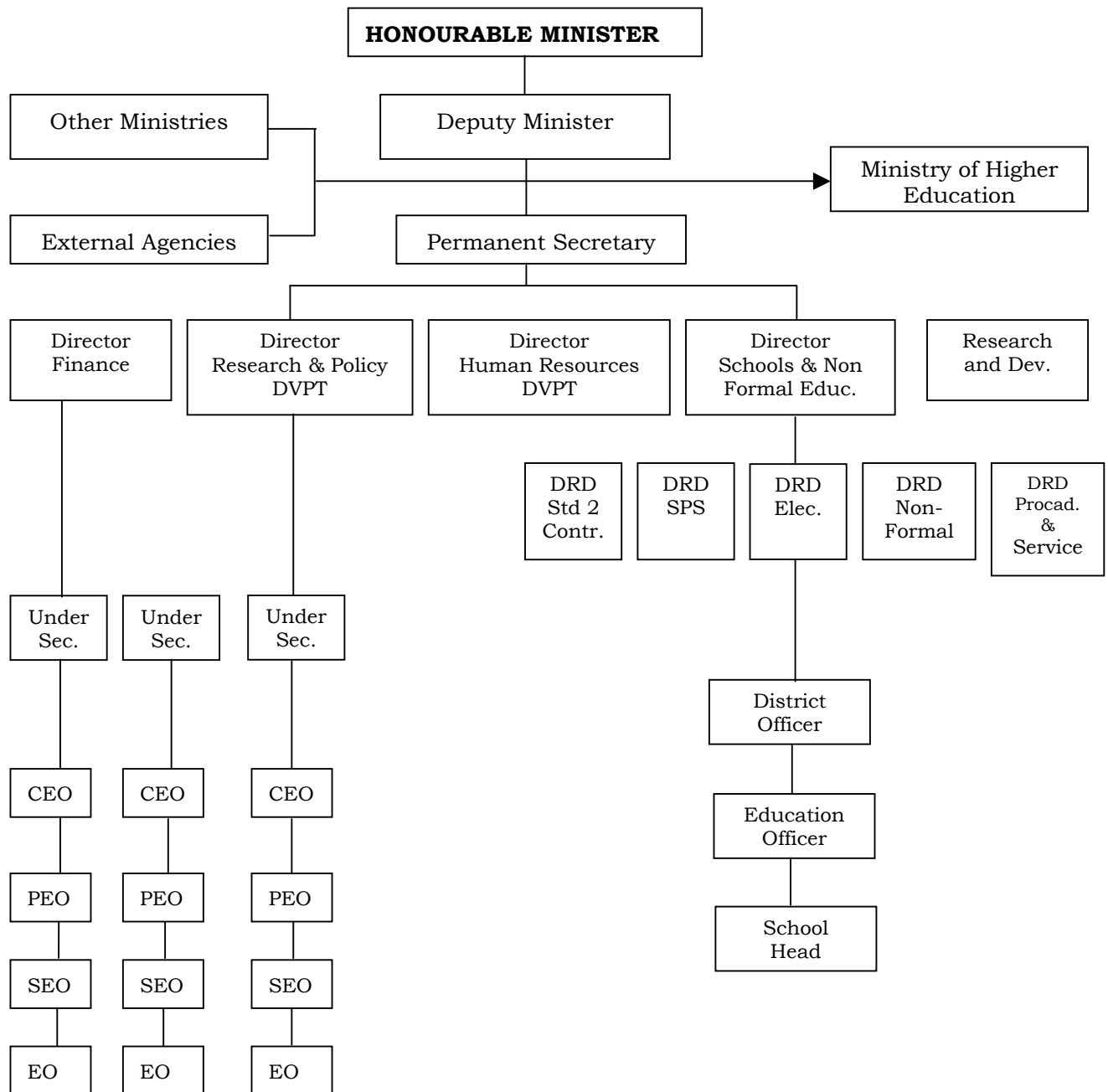
Self-Assessment 2

1. Review the general overview of the structure of the Ministry of Education in Botswana, which is presented on the following page. Categorise personnel in each component under the following headings: strategic apex, technostructure and support staff. In your answer, consider including personnel who are part of any ministry of education, but may not be listed in the structure on the next page.
2. In order to streamline the education system in Botswana, which aspects would you eliminate based on the discussion in this unit?

Possible answers to this activity are provided at the end of this unit.

**Provisional Structure of the Ministry of Education
Botswana**

(As conceived by Senior Education Officers participating in
STAMP 2000+.)



Adapted from the Government of Botswana, *5th Biennial Report (1994–1996)*.

You can do the same activity with the education system of your own country, but this time focus on the middle-line management.

Attempts have been made to streamline the education system in Zimbabwe. Although savings are great, the impact of this

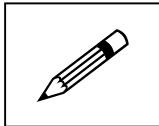
action has not yet been evaluated to determine how it has affected the delivery system.

Structure of the Operating Core

Student Body

Learners are part of the education system as an organisation. The grouping for instructional purposes is guided by bureaucratic regulations. Rules specify the school-going age range, promotion, repeating and so on.

Overleaf is the structure of the student body in Botswana from pre-school to university. This structure is the same as that of Zimbabwe, at least up to the end of primary school. The structure of the student body in Namibia is also included to enrich your comparisons. You may want to find out how learners are grouped for special education.

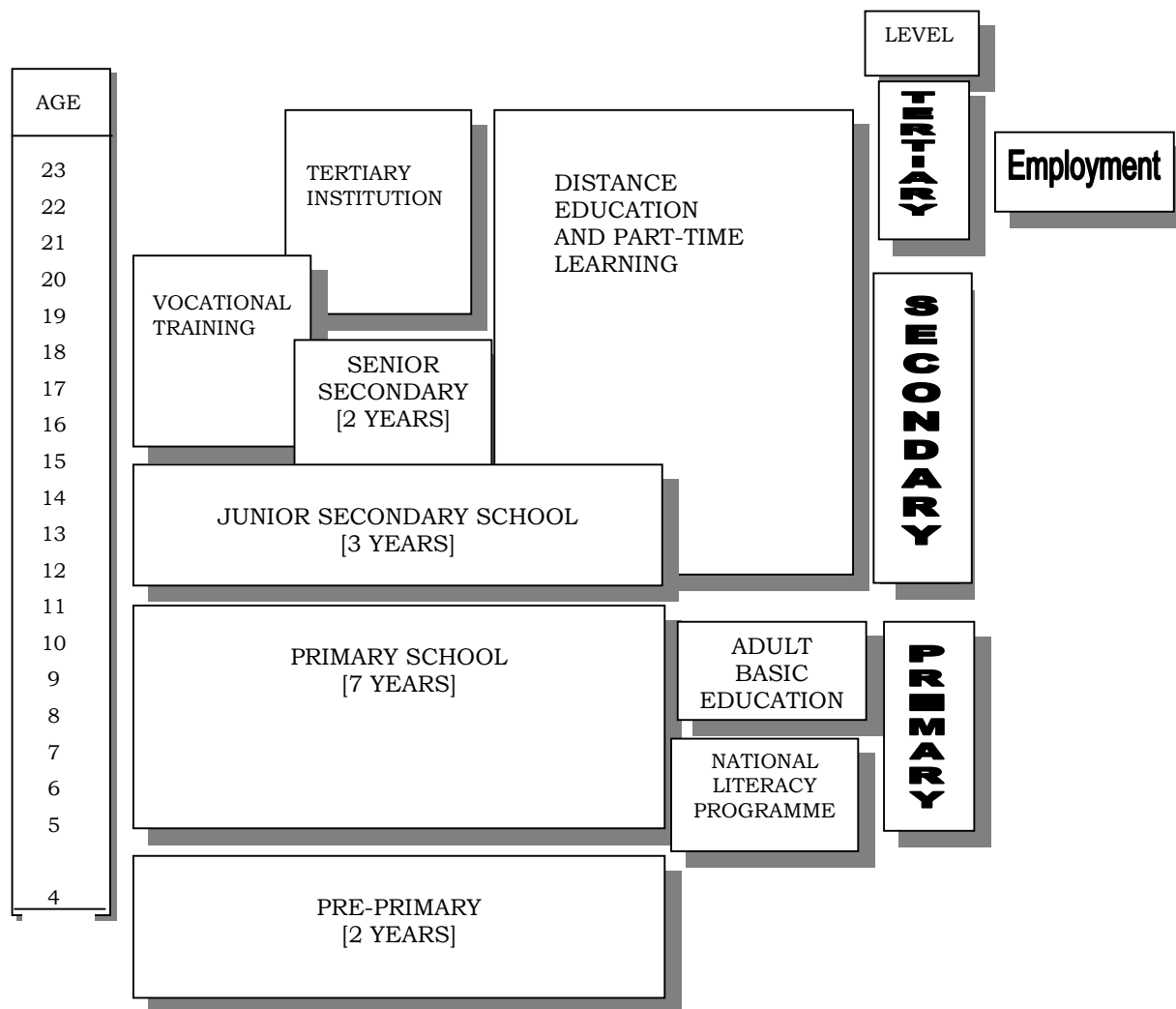


Self-Assessment 3

1. How long is a full education cycle in Botswana?
2. Which programmes are of secondary concern to the Ministry as reflected in the system structure?

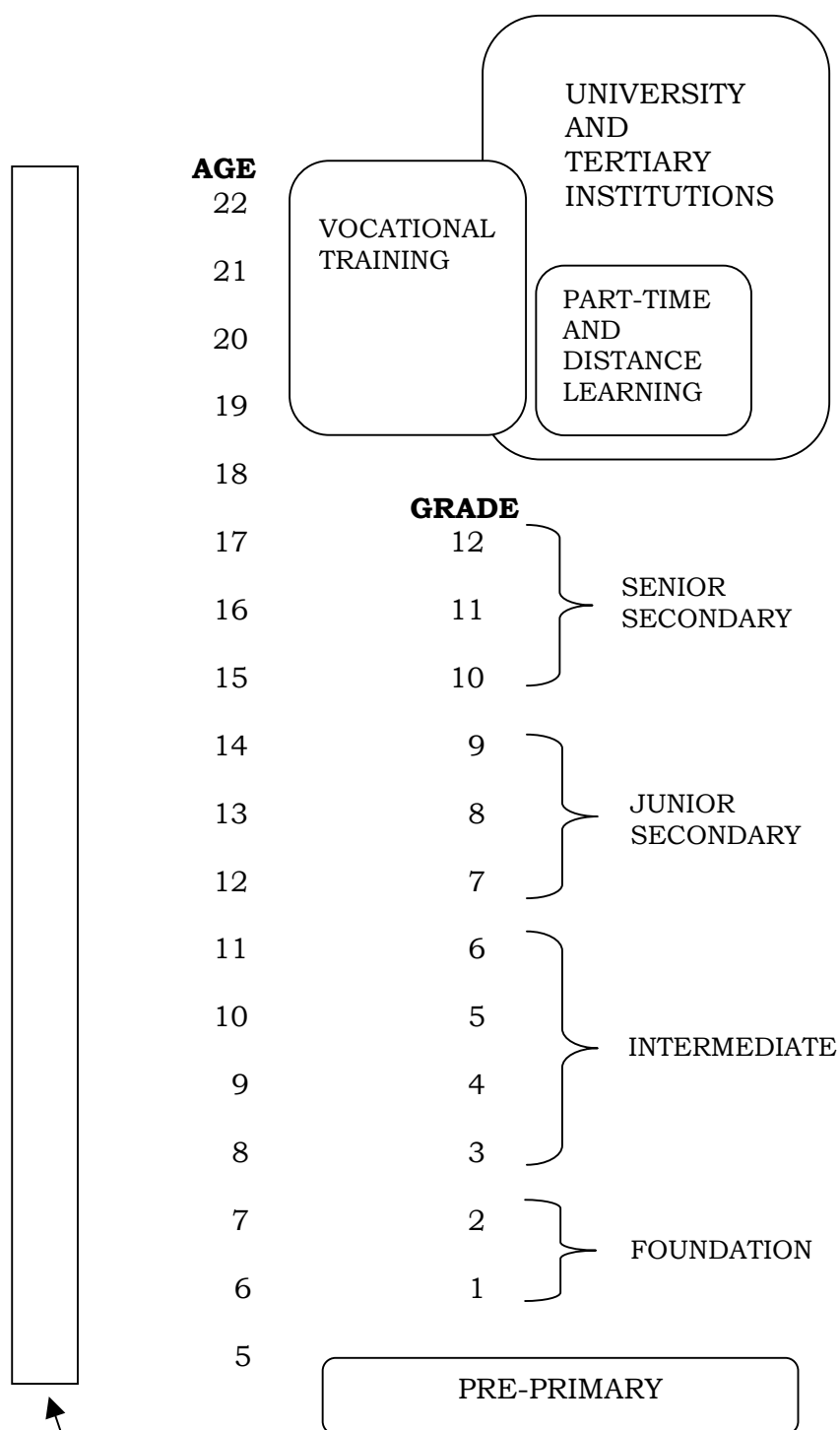
Possible answers to this activity are provided at the end of this unit.

The 7.3.2 Education System Structure in Botswana



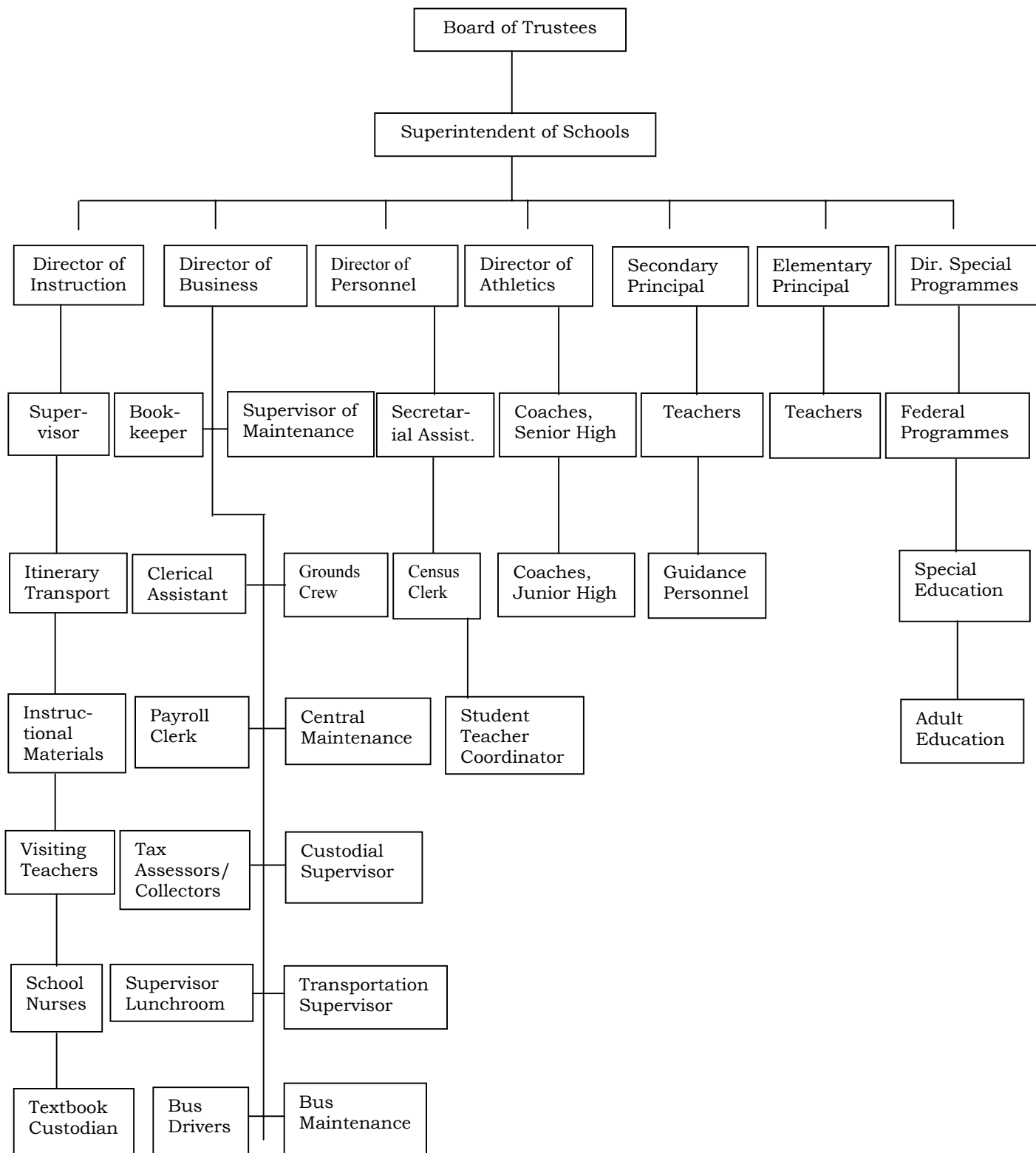
Adapted from the Government of Botswana, *5th Biennial Report (1994-96)*.

Structure of the Student Body in Namibia
(As described by STAMP 2000+ delegates from Namibia.)



In this column, list the grade that corresponds to a particular age of students in your country.

Structure of the Workforce at the School Level



You will notice that the diagram showing the work force at one school is obviously based on a very large establishment. If this is the structure of a single school, you can imagine that the structure of a national system is likely to be far more elaborate.

Outline the structure of workers at the school level in your country. How does it compare with the structure presented above?



Summary

This unit reviewed the structure of an education system. The school system was given as an example of an organisation with a purpose, membership and structure. The characteristics, strengths and weaknesses of bureaucracies were highlighted. The need to streamline the education bureaucracy was discussed. Caution was sounded against simply eliminating staff without due consideration of their job descriptions and the role they play in educating children. In the next unit, we will examine the outcomes of the education system.



Reflection

Could you improve the structure of the work force at your school? How would you do it?



Unit Test

1. Why is the school called an organisation?
2. Identify some negative characteristics of a bureaucracy.
3. What two mechanisms are used to bring about change in instructional behaviour, according to Beach and Reinhartz (1989)?
4. Which two sections of Mintzberg's organisational structure are usually reduced or eliminated if there is a lack of funds?
5. What benefits should one expect when the civil service is streamlined?



Suggested Answers

Self-Assessment 1

1. A school is an organisation because it has:
 - goals and purpose,
 - sense of belonging by membership,
 - structure, and
 - differentiated functions for members.
2. Bureaucracies:
 - are hierarchical,
 - rely on rules and regulations,
 - promote impersonal relationships,
 - have members with long career paths, and
 - have divisions of labour.
3. The five basic parts of Mintzberg's structural design model are:
 - Strategic Apex
 - Technostructure
 - Support Staff
 - Middle Line
 - Operating Core.

Self-Assessment 2

1.

<i>Strategic Apex</i>	<i>Technostructure</i>	<i>Support Staff</i>
Minister Permanent Secretary	Research and Development Planning Statistics Computer Systems Manager	Finance and Accounts Support and Liaison Services Student Welfare

2. It is impossible to provide one answer to this question. Based on the content in this unit and your experience, you may have eliminated a few personnel or none at all. If you had more information, such as job descriptions, it might have helped you with your decisions. However, the question was designed to encourage you to think of how you could improve not only the education system in Botswana, but the system in your own country.

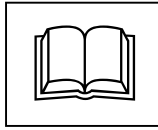
Self-Assessment 3

1. The full education cycle in Botswana is 18 years in length.
2. Adult basic education and national literacy programs appear to be of secondary concern to the Ministry.

Unit Test

1. The school is called an organisation because it has:
 - a sense of belonging among its members,
 - shared goals and purpose,
 - differentiation of functions, and
 - regularity of communications and channels of communication.
2. Negative characteristics of bureaucracy often include:
 - impersonal relationships,
 - long chains of communication that delay feedback,
 - a flow of power from the top down that can stifle the initiative of workers at lower levels, and
 - excessive paper work.
3. The mechanisms for bringing about change in instructional behaviour are structure and control.
4. If there is a lack of funds, usually the technostructure and support staff are reduced or eliminated.
5. When the civil service is streamlined, it is desirable that the bureaucracy become more efficient and effective and less expensive.

UNIT 6: Outcomes of the Education System



Introduction

The idea of outcomes in education is influenced by the input-output model borrowed from the manufacturing industry. In the education system, this model is beneficial because of its potential cost benefits.

Objectives

After completing this unit, you should be able to:

1. Identify outcomes of an education system.
2. Classify the benefits and costs of outcomes as either social or personal.
3. Highlight measures that enhance educational benefits.
4. Compare your education system to others in terms of educational outcomes, costs and benefits.

Education as an Investment

The belief that education is an investment is held by governments and individuals; otherwise, there would be no justification for the large amounts of money put into education when there are other competing sectors such as health, infrastructure and industrial development.

An investment in education is referred to as an investment in human capital. The African Development Bank (1998: 110) states, “Human capital development is seen as an essential means for sustained economic growth and poverty reduction and as an important end in itself.” This implies that all stakeholders stand to benefit from education.

The family can be considered first. Many families invest their meagre earnings in the education of their children. You may therefore ask, how much investment will improve the productive capacity of each family? The underlying factor here is the ability to pay. Some families will not be able to pay for education and thus be caught up in a poverty cycle generation after generation. Illiterate people have no access to information. Lack of information often results in poor families having more children than they can afford to support. Given the ever-dwindling resources, each generation is in a weaker position than its predecessors.

How can you break the poverty cycle at the family level? The policy consideration here is how much it costs to modify the family environment. While alternatives are many, universal basic education is considered the most viable. Compare the

families of your former classmates with your own family and your own family with the families of people who obtained more education than you did. In this process, you will observe that there are a lot of subtle but important issues of family differences that cannot be quantified. Many types of barriers could have stopped your friends from continuing in school. Financial or educational advantages may have accelerated your other friends beyond yourself.

We can adopt the family analogy given above when we consider national systems of education. The same poverty cycle is retained at district, provincial or regional and national levels, each with the same subtle barriers and advantages. At both family and state levels, you should ask who benefits from the investment. Remember, in investing we are concerned about higher returns – returns that exceed the cost. Investments in education provide high returns if they reduce dependence on the family or the state.

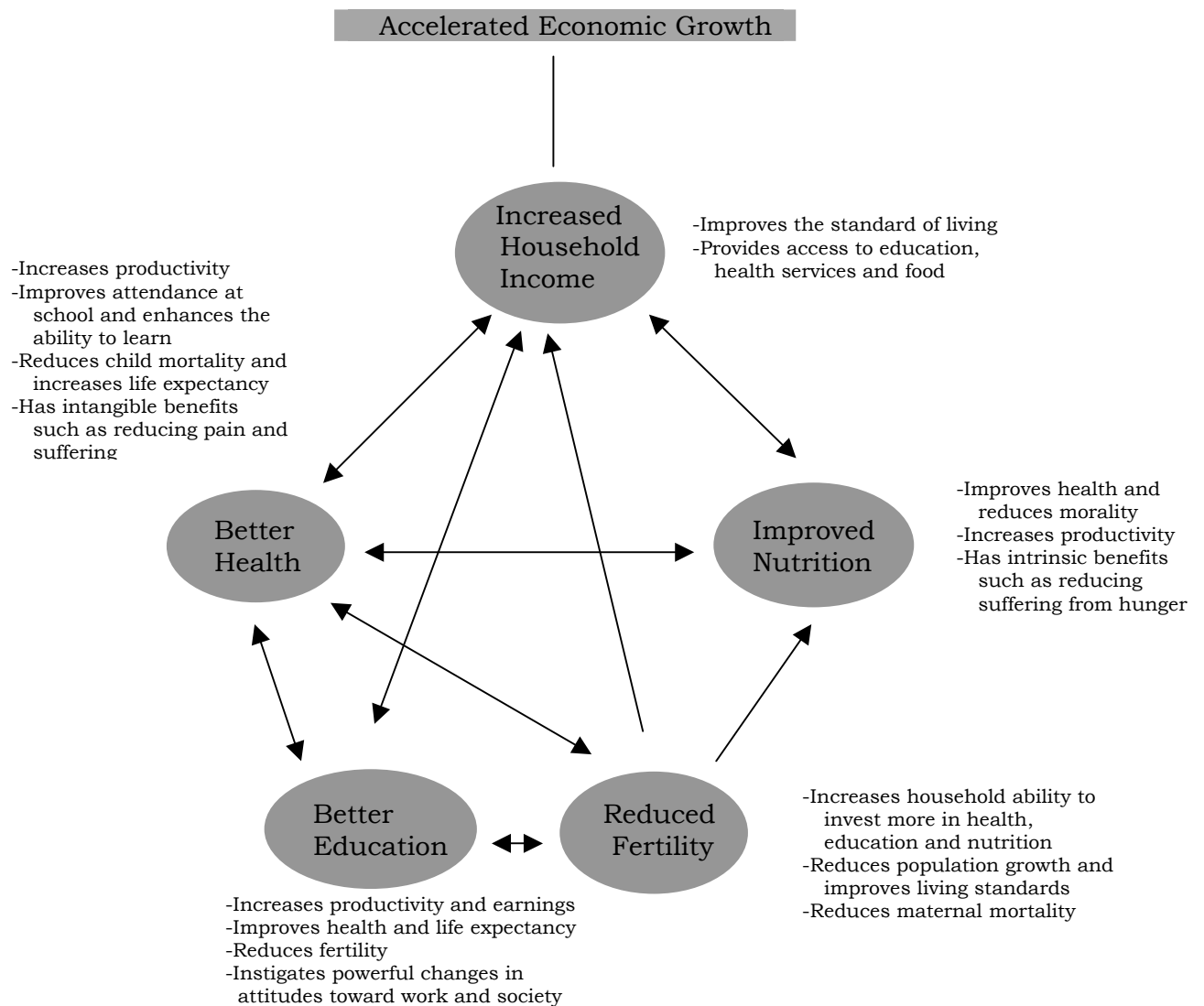
Categories of Educational Benefits

Educational benefits, as you may have noted, are at two levels:

- Personal or private benefits. These are the benefits that accrue to the ‘product’ of the school system, the graduate:
 - knowledge and skills
 - money and prestige.
- Social benefits are benefits that accrue to the family, society and the state. These may be improved health, productivity and revenue.

Below is a summary of these benefits.

Interrelationship Among Aspects of Human Capital

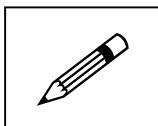


Source: *African Development Report*. (1998).

You will realise that two points are critical in breaking the poverty cycle referred to earlier. These points are:

- increased household income, and
- better education.

Both the children and the parents can benefit from education.



Self-Assessment 1

1. List the assumed benefits of education in the context of the concept of human capital development.
2. What are the two categories of educational benefits?
3. Who invests in education?

Possible answers to this activity are provided at the end of this unit.



The Cost of Education as an Input

Do you remember the input-output process model referred to earlier? We can now examine what countries have put into education financially.

Financial Commitment to Education in Zimbabwe

Year	Education Allocation	Percentage of Total Budget
1979/80	\$120 437 000	9.82%
1980/81	\$218 688 600	13.44%
1981/82	\$316 508 000	14.92%
1982/83	\$408 743 402	13.92%
1983/84	\$502 628 605	16.47%
1984/85	\$516 765 200	14.48%
1985/86	\$639 919 000	16.51%

Source: Ministry of Education and Culture Statistics, Government of Zimbabwe. (1992).

You will notice in the above table that there is a trend to increase the commitment to education each year.

You may ask, how is this an investment? The nature of the returns is such that they cannot easily be ploughed back into the system as one would in a manufacturing firm. Nevertheless, we may weigh the cost against physical assets and student output. Below is a table that can help in this respect.

School Enrolments in Zimbabwe

Year	Number of Primary Schools	Enrolment	Number of Secondary Schools	Enrolment
1979	2 401	819 586	177	6 615
1980	3 161	1 235 984	197	74 321
1981	3 698	1 715 168	694	148 690
1982	3 880	1 907 225	738	227 047
1983	3 960	2 044 487	790	316 348
1984	4 161	2 130 487	1 182	416 413
1985	4 234	2 216 878	1 215	482 000
1986	4 297	2 265 054	1 276	537 427

Source: Ministry of Education and Culture, Government of Zimbabwe. (1992).

There has been some return in terms of physical structures that become part of the wealth of the community. You can see that the secondary school sector, for example, had only 177

schools in the whole country in 1979, but there were 1, 276 in 1986.

The data from Botswana in the table below reflect similar trends.

School Enrolments in Botswana

<i>District</i>	<i>Schools 1979 - 1984</i>		<i>Classrooms 1979 - 1984</i>		<i>Number of Pupils 1979 - 1984</i>	
North East	27	31	179	248	8 748	10 308
Central	128	161	1 072	1 642	59 407	74 248
Kgatleng	80	33	202	266	9 605	10 709
Kweneng	48	64	369	538	17 327	25 861
Southern	57	81	365	517	20 433	28 147
East	12	14	131	176	5 933	6 976
Kgalagadi	20	18	082	129	4 276	5 294
Ghanzi	12	16	70	118	2 506	3 545
North West	33	45	189	279	10 578	14 580
Gaborone	10	22	132	267	6 504	12 587
Francistown	7	10	112	163	4 873	6 651
Lobatse	6	7	72	86	3 073	4 464
S-Phikwe	4	7	78	121	3 400	5 472
Jwaneng	0	3	0	43	0	930
Total	394	512	3 053	4 593	156 664	210 000

Source: Government of Botswana. *Biennial Reports*.

It is not the number of schools that matter. A school can be under a tree. Can you justify expenditure on the basis of under-tree classes? Again, it is not the numbers of children who go to school to be registered that matter. Do they complete the school cycle? This highlights issues of internal efficiency of the school system. Measures of internal efficiency may include:

- attendance rates
- dropout rates
- repetition rates
- transition rates.

Note that children must attend school regularly in order to benefit. Those who drop out in the first five years are at risk of relapsing back to illiteracy. Also note that repeating a grade means that more money is being spent on one child. This increases unit costs in general.

You may consider here the belief that basic education has higher social benefits while higher education has higher personal benefits.

Educational Output

Generally, the concept of output is limited to the number of children the system produces at the end of each cycle, whether it is primary, secondary or tertiary. Quite often, government reports emphasise this as an indicator of success. But is it really? Gatawa (1998: 7) complains that as a result, “The overall picture that emerges is that of education reduced to a mere number game.” Consequently, in order to enrich the output statistics, it is always important that you also look at the students’ achievement. Below are results from Botswana schools:

Results	Number of Candidates		% Pass	
	1992	(1991)	1992	(1991)
A	2 862	(3 208)	7.7	(8.4)
B	9 021	(8 550)	24.4	(22.1)
C	14 335	(15 702)	38.8	(41.1)
D	10 700	(10 863)	29.9	(28.4)
Total	36 918	(38 223)		

Results	Number of Candidates		% Pass	
	1993	(1992)	1993	(1992)
A	2 654	(2 862)	7.34	(7.7)
B	9 373	(9 021)	25.92	(24.4)
C	13 883	(14 335)	38.40	(38.8)
D	10 248	(10 700)	28.34	(29.9)
Total	36 158	(36 918)		

Source: Government of Botswana. *Biennial Reports*.

Considering that a grade of C is the lowest pass mark, we note that over 70% of the candidates make the grade. Whether this is good enough or not is not an issue here. The point is the school system is not doing badly, at least in this regard. Have a look at the following statistics from Zimbabwe:

	Grade 7 English	Grade 7 Math	ZJC English	ZJC Shona/Ndebele	O Level (All subjects)
1980	-	-	-	-	27.4%
1981	-	-	-	-	19.3%
1982	-	-	-	-	16.2%
1983	-	-	-	-	43.4%
1984	82.2%	77.8%	-	-	18.2%
1985	79.7%	86.8%	54.4%	-	16.1%
1986	77.7%	78.8%	45.4%	72.6%	15.5%
1987	81.6%	82.9%	42.5%	56.0%	17.3%
1988	50.4%	55.3%	33.0%	46.1%	18.8%
1989	60.6%	60.9%	33.9%	60.0%	-

Source: World Bank. (1990, September). *Sector Report. Zimbabwe: A Review of Primary and Secondary Education*.

What is interesting about these statistics is that student performance continues to decline with increases in enrolments and the number of schools. This is probably due to three reasons:

- Increased enrolments are not matched with increases in other inputs like qualified teachers and appropriate instructional materials.
- As more pupils are enrolled, the tendency is to include those who have learning difficulties, who in the past would be denied access.
- Automatic promotion to higher grades has resulted in weak pupils being simply pushed through the system without any remedial action being taken.

What is the situation like in your own country? Are the social returns in education higher at the primary school level than they are at other levels?

Self-Assessment 2

In order to give you practice in analysing educational data, refer to the table presenting school enrolment data for Botswana at the beginning of this unit, then answer the questions below.

1. Which district in Botswana had the second largest number of children in 1984?
2. What is the classroom-pupil ratio in this district?
3. Which method of comparative education deals with statistics you have worked out?
4. Which district had the smallest number of pupils in 1984?
5. Calculate its classroom-pupil ratio.
6. Which school has a better ratio?

Possible answers to this activity are provided at the end of this unit.

Other Indicators of Educational Outcomes

The African Development Bank (1998: 123) reports that “the children of educated parents face lower risks of premature death”. This is so because such parents can:

- quickly recognise health problems that threaten their children’s lives and take action;
- afford hospital and transport expenses needed to help the child recover;
- usually choose to live where there are health facilities; and

- afford a balanced diet, further enhancing the resilience of their children.

Effects of Health Status on Child Schooling

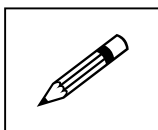
Poor health and malnutrition have a negative impact on the education of the young. Sickly children are often absent, and even when they are at school, they suffer from anxiety and inattention, leading to low grades (Jamison and Leslie, 1990, cited in World Bank, 1998: 1231). The same report further argues that “children are typically more likely to go to school if their parents are educated”.

Effects of Education on Fertility

Population growth is a cause of concern in the SADC region. “Fertility tends to be lower, where the levels of women’s education...are higher” (African Development Bank, 1998: 123).

Effects of Education on Productivity

Productivity is an obvious benefit of education. Every worker from the village crafts woman to the Minister of Education can benefit from education. The investment in education does not necessarily make people or their countries financially rich, but it nevertheless has long-term benefits. Opportunities missed in childhood can have adverse consequences that may not be remediated later in life.



Self-Assessment 3

1. Distinguish between education output and education outcomes.
2. How does the education of parents improve their children’s health?



Summary

This unit discussed the purpose and benefits of investing in education. It explained the concept of human capital. You were also exposed to the achievements of education systems in two countries. You should now explore the issues raised in this unit when reviewing the education system in your country.



Reflection

Read the quote below and reflect on what you have been studying in this unit.

Human capital development has been hampered by societal conflicts, which have affected and continue to affect many parts of the African continent. (African Development Bank, 1998: 133)



Unit Test

Answer the following questions.

1. What does social benefit refer to?
2. What does private benefit refer to?
3. At what levels of education are social benefits considered to be higher?
4. Why is the pass rate decreasing in Zimbabwe?

Answers to this unit test are provided at the end of this unit.



Suggested Answers

Self-Assessment 1

1. The benefits of education:
 - increased income
 - better health
 - better education for children
 - reduced fertility
 - improved nutrition
 - improved productivity.
2. Educational benefits are usually classified as personal or social benefits.
3. The following invest in education:
 - parents
 - the community
 - the state
 - donor agencies.

Self-Assessment 2

1. Southern District had the second largest number of children in 1984, with 28 147 learners in 517 classrooms.
2. $\frac{28\ 147}{517} = 54.44$ or 1 classroom for 54 learners, thereby yielding 517 a classroom-pupil ratio of **1:54**
3. The quantitative method involves the use of statistics.
4. Jwaneng had the fewest pupils in 1984, with 930 learners in 43 classrooms.
5. $\frac{930}{43} = 21.63$ or 1 classroom for 22 learners, thereby yielding 43 a classroom-pupil ratio of **1:22**
6. Jwaneng has a better ratio.

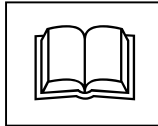
Self-Assessment 3

1. Educational output refers to the number of graduates the school system produces each year. Outcomes refer to the end results emanating from schooling, such as increased literacy.
2. The education of parents can improve their children's health because educated parents can afford a balanced diet and hospital fees, and they can recognise health risks and take quick action. Educated parents may also choose to settle near health facilities.

Unit Test

1. Social benefit refers to educational benefits that accrue to the community, society and the state.
2. Private benefit refers to benefits that accrue to the graduates and their immediate families.
3. Social benefits are higher at the basic education level. As the educational level increases, more benefits accrue to the students and their immediate families.
4. The pass rate could be decreasing in Zimbabwe because of:
 - the strain on resources
 - automatic promotion
 - lack of remediation
 - the inclusion of students with learning disabilities who were previously not taught in ordinary schools.

UNIT 7: Science, Technology and Mathematics Teaching in the Context of Human Capital Development



Introduction

This course would not be complete without a close look at the teaching of science, mathematics and technology. This unit therefore highlights the need for a curricular shift towards these subjects in the light of the needs of the countries involved.

Objectives

After completing this unit, you should be able to:

1. Justify the extra emphasis on the teaching of mathematics, science and technology in the SADC countries.
2. Assess innovations that have been attempted in this direction.
3. Develop case studies and compare them with the view to improving the teaching of science, mathematics and technology in your school.

Why Change Is Needed

Many of the SADC countries have looked to industry for economic growth, provision of employment and improvements in the standard of living for their people. It has been apparent, however, that these countries have continued to be heavily dependent on the **primary industries** of agriculture and mining. In general, they have remained providers of raw materials for the developed countries from which they buy finished products at very high prices, thus affecting their balance of payments. Considering that natural resources are finite, reliance on being providers of raw materials and not finished goods is dangerous.

Can you think of natural resources that your country exploits for the export market? What products are made from these resources? How many of these finished goods are manufactured locally? Compare the cost of locally produced goods with that of imported goods.

Brief Country Profiles

To substantiate issues raised above, examine the country profiles below.

For the whole continent there appears to be a shift from manufacturing towards mining and utilities. In Malawi, the 4% growth enjoyed in 1996 is threatened by cheap imports. In Zambia and Zimbabwe, production fell to ten year lows by 1995. A UNIDO survey in 1995 found that trade liberalisation had adversely affected manufacturing firms in Tanzania, Mozambique and Zambia.

(Adapted from African Development Bank, 1998.)

The description provided above is generaliseable across the SADC region with very few exceptions.

Proposed Aims for Science, Mathematics and Technology Teaching

Economic fundamentals aside, let us focus on education. Our argument is that the teaching of mathematics, science and technology should now be guided by:

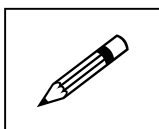
- The desire to shift our economies from primary production of raw materials to manufacturing by the application of scientific and technological principles and practices.
- The desire to produce graduates who are employment creators rather than job seekers.
- The desire to develop appropriate educational programmes that have flexibility.
- The desire to inculcate in our children the idea that natural resources are finite and therefore sustainable utilisation and protection of resources are vital.

The reasons for a shift in industrial modes have already been explained. However, you may benefit from this observation from the African Development Bank (1998: 142) that in Zimbabwe, “Between 1992 and 1995, formal employment declined by 3.4% while the informal sector expanded from 39.2% to 41% of the labour force.” The question is, should the education system continue to produce graduates for a declining sector or refocus on the expanding one? Just look around you in the streets, villages and growth points; you will see that a lot of people are unemployed. But do they know that they can employ themselves, that there is potential for limitless growth within that sector and that with appropriate training and technology they can actually end up being employers?

As a student of comparative education, start now to outline what kind of education is required to address the needs of this sector in your country.

It should be apparent that countries in the SADC region will continue to lose out until appropriate interventions are made. We propose here that:

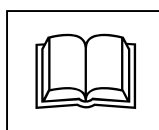
- The curriculum must be revised in order to accommodate the teaching of those subjects that are directly relevant to the problem at hand, in this case, production.
- In the light of an already overburdened curriculum, it is necessary to reduce the liberal arts component of our curriculum and increase the science, technology and mathematics components.
- The teaching of these subjects should take into account the ever-changing nature of world culture and consequently teach basic principles that withstand time, rather than content that is rendered obsolete very quickly.
- Rather than investing further in the horizontal and vertical expansion of education, more should be done to invest in appropriate education.



Self-Assessment 1

1. What is the argument presented in this unit regarding the teaching of science, technology and mathematics?
2. Define primary industry.
3. On which industrial sector are SADC countries currently dependent?
4. Which is the fastest growing economic sector in Zimbabwe?

Possible answers to this activity are provided at the end of this unit.



Benefits to the Manufacturing Sector

We are not suggesting that education systems neglect the needs of manufacturing firms by promoting the informal sector. It can be argued that at the present moment, education has not taken the employment prospects of its graduates seriously. Both the informal and formal sectors are starved of appropriately educated people. They are relying on expatriates who are very expensive.

The low technological capabilities of entrepreneurs, managers and workers have been identified as the root cause of poor productivity of industrial enterprises. In

Africa Econometric Studies by Biggs and Katuri [1997] in Ghana, Kenya and Zimbabwe provide striking evidence of the importance of technological capabilities. In particular, worker training has a very large impact on productivity.

They found learning from external sources was extremely weak or missing altogether and that most firms were technologically isolated from the rest of the world.

(Adapted from African Development Bank, 1998: 51-52.)

Now substitute the industrial firms with your school. Is your school similarly isolated? Many schools are, but that does not mean they should not teach technology. The argument of lack of resources has defeated a lot of good innovations that would have improved the African situation. It is quite true that science and technology may be difficult to teach without proper laboratories and well-equipped workshops. However, it is often the negative attitudes of teachers, rather than lack of resources, that lead to failure.

Review of Past Innovations

Education with Production

Right across the SADC region, there have been attempts to introduce education with production as a concept for encouraging self-reliance. Many innovations were influenced by philosophies of scientific socialism. Although evaluation reports indicated successes in Botswana, Zambia and Tanzania, these programmes have lost their early 1980s impetus. There could be many reasons for this:

- The collapse of the Soviet Union had a negative impact on many socialist-motivated initiatives.
- Colonialism had relegated manual labour to the Black 'inferiors' and white-collar jobs to White 'superiors', thus conditioning the Black population negatively against practical jobs.
- Innovative programmes were not accompanied by autonomous research that would inject new ideas that would keep them going.



Reflection

Do you think that the teaching of science and technology in the context of this course will succeed? What do you consider to be the major obstacles?



The Zimbabwe Science (ZIMSCI) Programme

The ZIMSCI programme was developed to:

- extend the teaching of science to remote rural schools that had no laboratories or trained teachers;
- produce low-cost text and non-text materials for use by teachers and students;
- provide in-service training to teachers in order to orient the hands-on, child-centred mode of teaching science; and
- de-mystify the teaching of science.

These aims provide a starting point. The ZIMSCI program was well funded by the Swedish International Development Agency (SIDA). Do these aims sound plausible to you? How do you rate them? Do you have better aims for the technology subjects?

The ZIMSCI program was developed using a research development and diffusion model. This implies that it was a well researched program prior to its implementation, but it failed to democratise the teaching of science.

Indicators of failure included:

- the wastage of materials at schools;
- insufficient instructional materials to guide the teacher and pupils in the use of the science kits;
- the erratic supply of kits due to problems of procurement of some of the components in the kits;
- the relegation of ZIMSCI programme to a second-class status when compared to other science subjects being taught at better equipped schools. A pass in ZIMSCI did not enable one to do science at 'A' level;
- lack of ongoing research to inject new ideas into the programme to keep it going; and
- lack of sustainable local funding.

Can you think of a similar programme in your country? Find out why it failed. It would appear that programmes that depend on donor funding are doomed to fail.

The Technical Subjects Kits Program

Similar to the ZIMSCI programme was the Technical Subjects Kits (TSK) programme, which focussed on making the teaching of technical subjects possible where there were no workshops and tools. Locally manufactured, low-cost tool kits and textual materials were made available to teachers and pupils.

Gatawa (1998: 46) observed that, "Problems with the implementation of the Technical Subjects Kits Programme have

been immense and have the same configuration as those discussed in connection with ZIMSCI.” Some of these problems relate to logistics, while others relate to the diverse background of schools. Some had no electricity, although they were supposed to teach metal work, agriculture and other science-based subjects. This programme was funded by the United States Agency for International Development (USAID). Do you think this might have contributed to its failure?



Self-Assessment 2

1. Why did programmes of education with production, which were started in the early 1980s, fade away?
2. What were the main aims of the ZIMSCI programme in Zimbabwe?

Possible answers to this activity are provided at the end of this unit.



Practice Activity

1. From which two programs should current innovations in science and technology teaching draw insights?
2. What were the common causes of failure of these programmes?
3. Which two donor agencies were sponsoring Zimbabwean programs?
4. What is the weakness of donor-funded programs?

Possible answers to this activity are provided at the end of this unit.



Summary

This unit has highlighted the need to teach science, mathematics and technology within the context of human capital development. It reviewed some similar innovations that have been attempted in the region. The reasons for the failure of these programmes were identified. However, failures are the birthplaces of new innovations.



Reflection

A good student of comparative education is one who gleans lessons from the successes and failures of education systems of different countries in order to build or improve his or her own system. You are urged to develop case studies of science and technology programmes in your region. Reflect on the strengths and weaknesses in science, mathematics and technology education in your country.

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Unit Test

1. From which sector do African countries expect economic growth?
2. Which economic sector is said to be growing fastest in Zimbabwe?
3. Identify the aims of emphasising the teaching of science, mathematics and technology.



Suggested Answers

Self-Assessment 1

1. The argument is that teaching of science, technology and mathematics should:
 - shift the economy towards manufacturing rather than primary industry;
 - produce creators of employment, not seekers of work;
 - lead to the development of flexible education programmes that address time and place needs; and
 - inculcate ideas such as the sustainable use of resources.
2. Primary industry refers to the sector that simply extracts natural resources without processing them.
3. SADC countries are currently dependent on primary industry.
4. The fastest growing sector in Zimbabwe is the informal sector.

Self-Assessment 2

1. Programs of education with production were based on the philosophical foundations of scientific socialism and declined when the former Eastern Bloc countries adopted capitalism. Also, they were affected by a lack of research and development.
2. The aims of the ZIMSCI programme were to:
 - extend the teaching of science to rural schools,
 - produce low-cost text and non-text materials,
 - provide in-service teacher training, and
 - de-mystify the teaching of science.

Practice Activity

1. The two programmes are the Zimbabwe Science Program (ZIMSCI) and the Technical Subjects Kits program (TSK).
2. The programmes failed because:
 - the donor funds ran out,
 - the procurement and distribution of kits were inefficient,
 - there was a lack of ongoing research,
 - there was wastage at the local school level.
3. The Swedish International Development Agency (SIDA) and United States Agency for International Development (USAID) donated funds.

4. Donor-funded programmes suffer from donor dependence. They often collapse once funding is withdrawn.

Unit Test

1. African countries expect economic growth in the formal industrial sector.
2. The informal sector is growing the fastest in Zimbabwe.
3. Aims of emphasising the teaching of science, mathematics and technology:
 - To shift the SADC economies from the primary production of raw materials to manufacturing.
 - To produce graduates who are employment creators rather than job seekers.
 - To develop appropriate educational programmes which have flexibility.
 - To inculcate in our children the idea that natural resources are finite and therefore sustainable utilisation and the protection of resources are vital.

Module Test

Read the letter to the editor below printed in *The Herald*, Tuesday, February 1, 2000, page 5 (Zimbabwe). Then, answer the questions that follow.

Are Uniforms a Prerequisite for Education?

In the hope that my concern for my workers' plight might touch the heart strings of the Minister of Education and his subordinates I take time out to express my concern for all parents who are subjected to totally unrealistic rules regarding pupils' dress in our schools.

The new school term has started, fees at one school in Mhondoro have risen from \$250 per term to \$350 and as an added burden the school now demands that all pupils wear proper shoes – not the cheaper tennis shoes – and all children must wear hats – all this in addition to massive increase in the cost of school uniforms.

If the parents of the pupils are not able to raise the funds for the increased school fees, the additional cost of shoes, of new uniforms, then the child is banned from school.

Would the minister care to answer the question whether it is the Government's priority to educate the children of this nation or banish them to a life of illiteracy because their parents cannot afford a new hat?

I am sure that over the years I have read in your newspaper ministerial denials that uniforms are a prerequisite for school attendance, and yet in this era of economic hardship, years of poor crop yields in the rural areas and new starvation, the hierarchy (be it school boards, headmasters or the ministry) still demand a standard reminiscent of bygone colonial days.

When are the schools going to receive a directive to admit children with or without uniforms and when are the headmasters going to be taken to task for flouting the directive?

What happened to the boast of "education for all by the year 2000"?

Pride in one's school uniform is laudable but not at the expense of a child's future!

"Concerned", Harare

PART A

The questions below are based on the letter to the editor provided on the previous page.

1. The writer clearly states what he or she considers to be a principal aim of an education system. What is that aim?
2. What does he or she believe is the school policy that hinders that aim?
3. What reason does the author give that accounts for the school's insistence on a strict uniform code?
4. How might school authorities justify strict adherence to this code?
5. What might be the hidden costs of this decision for teachers?
6. What are the two elements of the output of a school that they need to consider?
7. How might the decision taken by school authorities affect both elements of the output?
8. Which other group on the community might resist this policy on uniforms and why?
9. Suggest ways the school authorities might best have tackled the formulation and implementation of this policy.
10. a. Does such a policy on uniforms exist at your school?
b. Considering what you have studied about education systems in the SADC countries, explain whether such a policy is fitting and acceptable.

PART B

11. Why was it an imperative for newly independent SADC countries to expand educational opportunities?
12. Recently, SADC countries have realised the need to expand and revise their science, mathematics and technology programmes.
 - a. What factors have led to this realisation?
 - b. What difficulties will they encounter in implementing quality programmes in these areas?
13. The Curriculum 2005 initiative in South Africa seems to depart from the educational policies in most SADC countries. What aspects of Curriculum 2005 make it unique?
14. Language policy has been used to facilitate nation building. Illustrate how language played a significant role in the post-colonial period in SADC countries and outline the difficulties in implementing language policies.

15. What obstacles did SADC countries face in implementing educational reform? Describe at least five obstacles and include examples from your own country.
16. List at least six benefits for individuals and society when a nation's people are educated or at least literate.

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